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ANNUAL REPORT
OF
The Boston City Hospital
BOSTON, MASS.



1928

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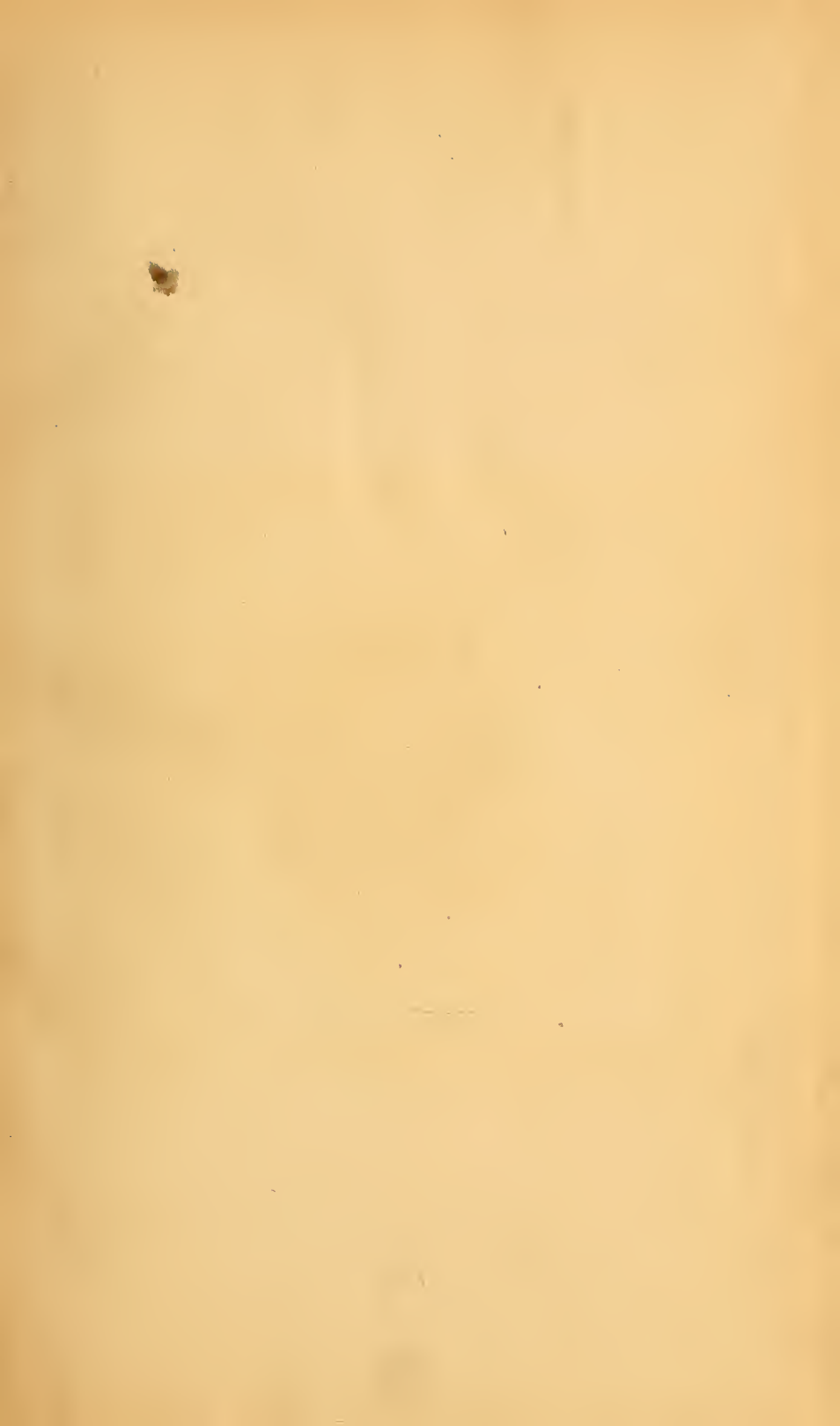
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1928



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Boston City Hospital





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SIXTY-FIFTH ANNUAL REPORT
OF
THE TRUSTEES
OF
THE BOSTON CITY HOSPITAL
INCLUDING THE
REPORT OF THE SUPERINTENDENT
UPON THE
HOSPITAL PROPER
THE SOUTH DEPARTMENT FOR INFECTIOUS DISEASES
THE SANATORIUM DIVISION FOR TUBERCULOSIS
THE HAYMARKET SQUARE RELIEF STATION
THE EAST BOSTON RELIEF STATION
THE CONVALESCENT HOME AT DORCHESTER
THE WEST DEPARTMENT
AND ALSO THE
HOUSE RULES, WITH RULES FOR ADMISSION, DISCHARGE
AND GOVERNMENT OF PATIENTS, ETC.
FOR THE SIXTY-FIFTH YEAR
JANUARY 1, 1928, TO DECEMBER 31, 1928, INCLUSIVE



CITY OF BOSTON
PRINTING DEPARTMENT
1929

* 6359.17

Boston City Hospital
April 4, 1930

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HOSPITAL

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SIXTY-FIFTH ANNUAL REPORT
OF THE
TRUSTEES
OF
THE BOSTON CITY HOSPITAL

WITH
REPORT OF THE SUPERINTENDENT
THE HOUSE RULES, WITH RULES FOR ADMISSION, DIS-
CHARGE AND GOVERNMENT OF PATIENTS, ETC.

FOR THE
SIXTY-FIFTH YEAR, JANUARY 1, 1928, TO
DECEMBER 31, 1928, INCLUSIVE.

TRUSTEES.

JOSEPH P. MANNING, <i>President</i>	Term expires in 1931.
HENRY S. ROWEN, M. D., <i>Secretary</i>	Term expires in 1932.
GEORGE G. SEARS, M. D.	Term expires in 1933.
CARL DREYFUS	Term expires in 1930.
ALEXANDER WHITESIDE, ESQ.	Term expires in 1929.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians and Surgeons.

Vincent Y. Bowditch, M. D.	Henry Jackson, M. D.
Abner Post, M. D.	George G. Sears, M. D.
H. W. Cushing, M. D.	John Bapst Blake, M. D.
Francis S. Watson, M. D.	Paul Thorndike, M. D.
George H. Monks, M. D.	John L. Ames, M. D.
Morton Prince, M. D.	Fred B. Lund, M. D.
Elliott P. Joslin, M. D.	Joshua C. Hubbard, M. D.

Consulting Pathologists.

W. T. Councilman, M. D.	F. B. Mallory, M. D.
-------------------------	----------------------

Consultant in Tropical Diseases.

Richard P. Strong, M. D.

Consultant in Ophthalmology.

Allen Greenwood, M. D.

Consulting Aural Surgeon.

Rockwell A. Coffin, M. D.

Consulting Physicians in Neurology.

Arthur W. Fairbanks, M. D. | John J. Thomas, M. D.

Curator of the Hospital Museum.

Townsend W. Thorndike, M. D.

Senior Physician.

Francis H. Williams, M. D.

Visiting Physicians.

William H. Robey, M. D.†	Edward N. Libby, M. D.‡
Ralph C. Larrabee, M. D.*	George R. Minot, M. D.§
Franklin W. White, M. D.	Francis W. Palfrey, M. D.
Edwin A. Locke, M. D.	Cadis Phipps, M. D.

Assistant Visiting Physicians.

Harold W. Dana, M. D.	William R. Ohler, M. D.
Thomas J. O'Brien, M. D.	Edmund F. Walsh, M. D.

Junior Visiting Physicians.

Burton E. Hamilton, M. D.	Louis F. Curran, M. D.
Joseph M. Lynch, M. D.	Joseph T. Wearn, M. D.
Joseph E. Hallisey, M. D.	Maurice Fremont-Smith, M. D.
John A. Foley, M. D.	Percy B. Davidson, M. D.
George C. Shattuck, M. D.	Henry Baker, M. D.
Louis J. Ullian, M. D.	George P. Reynolds, M. D.
Dwight O'Hara, M. D.	James Faulkner, M. D.
Henry Jackson, Jr., M. D.	William B. Stevens, M. D.
Frank S. Cruickshank, M. D.	Nathan Sidel, M. D.
Daniel J. Hogan, M. D.	William J. O'Halloran, M. D.

Senior Surgeon.

George W. Gay, M. D.

* Physician-in-Chief, First Medical Service.

† Physician-in-Chief, Second Medical Service.

‡ Physician-in-Chief, Third Medical Service.

§ Physician-in-Chief, Fourth Medical Service.

Surgeons-in-Chief.

Frederic J. Cotton, M. D.	Halsey B. Loder, M. D.
David D. Scannell, M. D.	Irving J. Walker, M. D.
Horace Binney, M. D.	Arthur R. Kimpton, M. D.

Visiting Surgeons.

Robert C. Cochrane, M. D.	Francis F. Henderson, M. D.
Otto J. Hermann, M. D.	Herbert H. Howard, M. D.
Somers Fraser, M. D.	James J. Hepburn, M. D.

Associate Professor of Surgery.

Edward D. Churchill, M. D.

Assistant Visiting Surgeons.

Donald Munro, M. D.	Augustus Riley, M. D.
Joseph H. Shortell, M. D.	William R. Morrison, M. D.
Edward Harding, M. D.	

Junior Visiting Surgeons.

Thomas K. Richards, M. D.	George W. Papen, M. D.
Thomas W. Wickham, M. D.	Charles C. Lund, M. D.
Joseph H. Burnett, M. D.	

Assistants to Visiting Surgeons.

E. Everett O'Neil, M. D.	Gerald L. Doherty, M. D.
William F. Cotting, M. D.	John A. Seth, M. D.
John J. Lucy, M. D.	Richard I. Smith, M. D.
Howard A. Bouvé, M. D.	Newton C. Browder, M. D.

Surgeon-in-Chief for Gynecology and Obstetrics.

Nathaniel R. Mason, M. D.

Visiting Surgeon for Gynecology and Obstetrics.

Robert M. Green, M. D.

Assistant Visiting Surgeons for Gynecology and Obstetrics.

John T. Williams, M. D.	Frederick L. Good, M. D.
Joseph P. Cohen, M. D.	

Junior Visiting Surgeons for Gynecology and Obstetrics.

Harold V. Hyde, M. D.	Pierce J. Dunphy, M. D.
Frederick J. Lynch, M. D.	Abraham S. Troupin, M. D.
Reginald D. Margeson, M. D.	Carmi R. Alden, M. D.

Ophthalmic Surgeon-in-Chief.

Jeremiah J. Corbett, M. D.

Visiting Ophthalmic Surgeons.

L. Colby Rood, M. D.	|	Leon W. Jessaman, M. D.
Samuel H. Wilkins, M. D.		

Assistant Visiting Ophthalmic Surgeons.

Harry Schwartzman, M. D.	|	Paul G. Haire, M. D.
Thomas J. Hagan, M. D.	|	Robert W. French, M. D.

Surgeon-in-Chief for Diseases of Ear and Throat.

Harry P. Cahill, M. D.

Visiting Surgeon for Diseases of Ear and Throat.

Louis M. Freedman, M. D.

Visiting Surgeon for Oral and Plastic Surgery.

Varatzad H. Kazanjian, M. D.

Assistant Visiting Surgeons for Diseases of Ear and Throat.

William T. Haley, M. D.		Edward J. Monahan, M. D.
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Junior Visiting Surgeons for Diseases of Ear and Throat.

Philip E. A. Sheridan, M. D.		Philip R. Dwyer, M. D.
William F. Regan, M. D.	|	Chester R. Mills, M. D.
Edmund J. Butler, M. D.	|	Francis G. Minitier, M. D.

Oral Surgeon-in-Chief.

Stephen P. Mallett, D. M. D.

Visiting Oral Surgeons.

William H. Canavan, D.M.D.		D. Thomas Hennessey, D.M.D.
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Assistant Visiting Oral Surgeons.

Douglass M. Baker, D.M.D.		George F. Winchester, D.M.D.
Austin T. Williams, D. M. D.		

Visiting Anesthetists.

Frank L. Richardson, M. D.		Nathaniel N. Morse, M. D.
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Assistant Visiting Anesthetists.

William A. Noonan, M. D.		Sidney C. Wiggin, M. D.
--------------------------	--	-------------------------

Visiting Physicians for Neurology.

Stanley Cobb, M. D. | Abraham Myerson, M. D.

Assistant Visiting Physician for Neurology.

Miner H. A. Evans, M. D.

Junior Visiting Physicians for Neurology.

Maxwell E. MacDonald, M.D. | William G. Lennox, M. D.

Frank Fremont-Smith, M. D.

Acting Physician-in-Chief for Physical Therapeutics.

Joseph Resnik, M. D.

Physician-in-Chief for Diseases of the Skin.

Townsend W. Thorndike, M. D.

Visiting Physician for Diseases of the Skin.

William P. Boardman, M. D.

Assistant Visiting Physicians for Diseases of the Skin.

Walter T. Garfield, M. D. | John G. Downing, M. D.

Junior Visiting Physicians for Diseases of the Skin.

Bernard Appel, M. D. | Francis P. McCarthy, M. D.

Physician-in-Chief for Contagious Diseases.

Edwin H. Place, M. D.

Roentgenologist-in-Chief.

P. F. Butler, M. D.

Visiting Roentgenologists.

Max Ritvo, M. D. | Frederick W. O'Brien, M. D.

Physician-in-Chief for Immunology.

George P. Sanborn, M. D.

Assistant Visiting Physicians for Immunology.

Edmund F. Walsh, M. D. | LeRoy A. Luce, M. D.

Pediatrician-in-Chief.

Martin J. English, M. D.

Visiting Pediatricians.

Augustine W. McGarry, M. D. | Eli Friedman, M. D.

Assistant Visiting Pediatrician.

John J. Dunphy, M. D.

Junior Visiting Pediatricians.

George Kahn, M. D.	| James W. Redmond, M. D.
John P. Treanor, Jr., M. D.	| Chester L. Glenn, M. D.

Physicians to Convalescent Home.

John P. Treanor, M. D.	| Henry F. R. Watts, M. D.
Joseph J. O'Brien, M. D.	

SANATORIUM DIVISION.

Chief of Staff.

Edwin A. Locke, M. D.

First Assistant Physician.

Timothy J. Murphy, M. D.

Pathologist.

Robert A. H. MacKeen, M. D.

Surgical Assistant.

Albert Ehrenfried, M. D.

Laryngological Assistant.

Charles E. Shay, M. D.

Roentgenologist.

Frederick W. O'Brien, M. D.

Visiting Dental Surgeon.

Frederick A. Keyes, D. M. D.

ASSISTANTS TO THE VISITING STAFF.

(December 31, 1928).

Terms of one year.

Assistants in Medicine.

William T. O'Halloran, M.D.	Beginning January 1, 1928.
Hyman B. Goldberg, M. D.	Beginning January 1, 1928.
I. R. Jankelson, M. D.	Beginning January 1, 1928.
William B. Castle, M. D.	Beginning January 1, 1928.
Soma Weiss, M. D.	Beginning January 1, 1928.
Herrman L. Blumgart, M.D.	Beginning January 1, 1928.
Albert W. Bromer, M. D.	Beginning January 1, 1928.
James H. Townsend, M. D.	Beginning January 1, 1928.
William Dameshek, M. D.	Beginning January 1, 1928.
Arthur C. Ernestene, M. D.	Beginning January 1, 1928.
Norman Weleh, M. D.	Beginning January 13, 1928.
Samuel Morein, M. D.	Beginning February 3, 1928.
Lloyd D. Felton, M. D.	Beginning December 7, 1928.

Assistants in Surgery.

Gordon D. Atkinson, M. D.	Beginning January 1, 1928.
A. Bedell Shoemaker, M. D.	Beginning January 1, 1928.
Philip S. Foisie, M. D.	Beginning January 1, 1928.
Aaron Thurman, M. D.	Beginning January 1, 1928.
David D. Berlin, M. D.	Beginning January 1, 1928.
Allan L. Davis, M. D.	Beginning January 1, 1928.
Daniel C. Goldfarb, M. D.	Beginning January 1, 1928.
John V. McMackin, M. D.	Beginning February 1, 1928.
Francis X. Shea, M. D.	Beginning March 1, 1928.
Tracy J. Putnam, M. D.	Beginning March 1, 1928.
G. Kenneth Coonse, M. D.	Beginning March 1, 1928.
Michael E. McGarty, M. D.	Beginning May 1, 1928.
William A. White, Jr., M. D.	Beginning May 1, 1928.
Llewellyn H. Rockwell, M.D.	Beginning May 1, 1928.
Robert J. Kirkwood, M. D.	Beginning May 1, 1928.
Arthur B. Donovan, M. D.	Beginning May 1, 1928.
Benedict F. Boland, M. D.	Beginning May 1, 1928.
Panos Dukakis, M. D.	Beginning August 1, 1928.
Joseph W. Tiede, M. D.	Beginning August 1, 1928.

Gordon M. Morrison, M. D.	Beginning August 1, 1928.
Leonard P. Landry, M. D. .	Beginning August 1, 1928.
Winchester W. Everett, M.D	Beginning August 1, 1928.
Daniel J. Duggan, M. D. .	Beginning November 1, 1928.
John E. Hopkins, M. D. .	Beginning November 1, 1928.
Thomas P. Kendrick, M. D.	Beginning November 1, 1928.
Paul N. A. Rooney, M. D. .	Beginning November 1, 1928.
David S. Greene, M. D. .	Beginning November 1, 1928.

Assistants in Gynecology and Obstetrics.

Emilio D'Errico, M. D. .	Beginning January 2, 1928.
G. Elliott May, M. D. .	Beginning October 1, 1928 (for three months).

Assistants in Neurology.

Tracy J. Putnam, M. D. .	Beginning September 7, 1928.
Edwin F. Gildea, M. D. .	Beginning September 7, 1928.
Guy C. Randall, M. D. .	Beginning October 1, 1928.
Mark H. Wentworth, M. D.	Beginning October 1, 1928.

Voluntary Assistants.

Humphrey L. McCarthy, M. D., X-Ray Department.	Beginning March 2, 1928.
James W. Shea, M. D., Oph- thalmic Department. .	Beginning June 8, 1928.
Isadore Green, M. D., Neuro- logical Department .	Beginning June 22, 1928.
Samuel S. Ellis, M. D., Fourth Medical Service .	Beginning August 1, 1928.

HOUSE OFFICERS.

The following-named house officers have completed service during the year 1928:

Isadore Olef, M. D., Medical Service	20½ months
Raymond J. Savage, M. D., Medical Service	16½ months
Samuel M. Perlmutter, M. D., Medical Service	20 months
George K. Mallory, M. D., Medical Service	20½ months
David Ayman, M. D., Medical Service	18 months
Ben Arbor, M. D., Medical Service	16 months
Maxwell Finland, M. D., Medical Service	16 months
David Stern, M. D., Medical Service	20 months
Donald C. Hoffman, M. D., Medical Service	20½ months
William S. Altman, M. D., Medical Service	16½ months
Lewis R. Dretler, M. D., Medical Service	19 months
Nathan Zibel, M. D., Medical Service	20½ months
Ralph E. Wheeler, M. D., Medical Service	20½ months
Henry R. Gilbert, M. D., Surgical Service	17 months
Wylie L. Collins, M. D., Surgical Service	20½ months
Samuel Bryan, M. D., Surgical Service	20½ months
Daniel J. McSweeney, M. D., Surgical Service	20½ months
Harold J. Black, M. D., Surgical Service	21½ months
Abraham S. Lavine, M. D., Surgical Service	20 months
Gordon M. Morrison, M. D., Surgical Service	20 months
John A. Coyne, M. D., Surgical Service	20½ months
Stanley J. G. Nowak, M. D., Surgical Service	20 months
Edward A. Cooney, M. D., Surgical Service	20½ months
Alfred M. Roscoe, M. D., Surgical Service	18½ months
William S. Justice, M. D., Surgical Service	20 months
James K. Bragger, M. D., Surgical Service	20 months
Henry Briggs, M. D., Surgical Service	20½ months
Reginald F. Johnston, M. D., Surgical Service	16½ months
Peter F. Weiss, M. D., Gynecological and Obstet- rical Service	16½ months
David Rose, M. D., Gynecological and Obstetrical Service	16 months
Robert L. Loring, M. D., Gynecological and Obstetrical Service	16½ months
James W. Shea, M. D., Ophthalmic and Aural Service	20 months

Robert O. Gilmore, M. D., Ophthalmic and Aural Service	20 months
Frank C. D'Elseaux, M. D., Neurological Service,	6 months
Samuel H. Epstein, M. D., Neurological Service,	12 months
Porter S. Dickinson, M. D., Neurological Service,	6 months
Richard B. Easley, M. D., Neurological Service,	6 months
Thomas L. Fentress, M. D., Neurological Service,	6 months
Michael J. Cox, M. D., X-Ray Service	17½ months
Albert M. Moloney, M. D., X-Ray Service	11 months
Francis L. Shay, M. D., Pediatric Service	10 months
Chester L. Glenn, M. D. Pediatric Service	10 months
James W. Redmond, Jr., M. D., Pediatric Service,	10 months
Charles E. Dyer, M. D., Pediatric Service	10 months
Harold D. Pyle, M. D., Pediatric Service	10 months
Lawrence E. Thompson, M. D., Pediatric Service,	10 months

HOUSE OFFICERS ON DUTY.

(December 31, 1928.)

Medical Service.

House Physicians.

Abraham N. Caplan.	James C. Healy.
Herbert S. Saver.	Walter R. Berryhill.

Senior Internes.

Maurice O. Belson.	Abraham L. Pierson.
Julius Abramson.	Jacob Lerman.

Externes.

Maurice B. Strauss.	Hugh C. Donahue.
Israel Steinberg.	James McR. Bethea.

Junior Internes.

Harry Hyman.	Paul D. Rosahn.
Max I. Vinnecour.	Harold A. Hogue.

SURGICAL SERVICE.

House Surgeons.

Roger T. Doyle.	John W. Burke.
Charles A. Knowles.	John W. Strieder.
LeRoy Goodman.	Louis E. Hathaway, Jr.

Senior Internes.

Edward M. Smith.	Raymond K. Farnham.
Edward H. Taylor.	Irving W. Parkhurst.
Arthur T. Ronan.	Maurice J. Langsam.

Accident Floor House Officers.

James V. Sacchetti.	John V. Leech.
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Externes.

James L. Golden.	Theodore C. Bramhall.
Sanford H. Moses, Jr.	Helmer P. Howd.
Abraham E. Hiebert.	Edward J. West.

Junior Internes.

Edward A. Edwards.	Carl J. DePrizio.
Chauncy V. Perry.	Leo R. Desmond.
Lewis R. Dretler.	Alexander P. Aitken.

GYNECOLOGICAL AND OBSTETRICAL SERVICE.

House Surgeon.

Edward H. Linnehan.

Senior Interne, Obstetrical Service.

James J. Meehan.

Senior Interne, Gynecological Service.

Daniel J. McSweeney.

Externe.

Christopher J. Duncan.

Junior Interne.

Lewis P. James.

Etherizer.

Samuel Sidel.

OPHTHALMIC AND AURAL SERVICE.

House Surgeon.

Vincent J. Kelley.

Senior Interne, Aural Service.

Frederick H. Salls.

Senior Interne, Ophthalmic Service.

William W. Haley.

Junior Interne.

Thomas E. Dinan.

NEUROLOGICAL SERVICE.

House Physician.

Roderick Heffron.

Senior Interne.

Leopoldo Pardo.

Junior Interne.

Paul C. Dozier (Substitute).

PEDIATRIC SERVICE.

Senior Out-Patient House Officer.

John C. Faherty.

House Physician.

John E. Darrow.

Senior Interne.

Samuel H. Segool.

Externe.

John B. Lynch.

Junior Interne.

Eugene F. Gorman.

X-RAY SERVICE.

Lawrence A. Martineau.

Charles A. Galligan, Jr.

HOUSE OFFICERS AT THE SOUTH DEPARTMENT.

Nathan Bresnick.

Benedict Ramin.

William E. Davis.

Franklin R. Miller.

HOUSE OFFICERS AT THE HAYMARKET SQUARE RELIEF STATION.

Frank B. Easley.

Herbert B. Nelson.

Paul F. Doege.

HOSPITAL OFFICERS.

John J. Dowling, M. D., *Superintendent and Medical Director.*
Edmund W. Wilson, M. D., *Assistant Superintendent.*
James W. Manary, M. D., *Executive Director of the Out-Patient Department.*
Francis S. Brodric, M. D., *Executive Assistant.*
M. Winthrop O'Connell, M. D., *Executive Assistant.*
Donald S. McKinnon, M. D., *Executive Assistant.*
Panos Dukakis, M. D., *Night Executive Assistant.*
Alexander J. A. Campbell, M. D., *Resident Surgeon.*
Herbert G. Dunphy, M. D., *Assistant Resident Surgeon.*
Frank B. Mallory, M. D., *Pathologist.*
George R. Minot, M. D., *Director of the Thorndike Laboratory.*
Joseph T. Wearn, M. D., *Associate Director of the Thorndike Laboratory.*
P. F. Butler, M. D., *Roentgenologist-in-Chief.*
A. T. Kirk, Ph. G., *Chief Pharmacist.*
Miss Emma M. Nichols, *Counsellor to the Training School.*
Miss Ellen C. Daly, *Superintendent of Nurses and Matrons.*
Miss Gertrude L. Farmer, *Director of Social Work.*
Miss Joanna E. Sweeney, *Registrar.*
Miss Ruth T. Church, *Out-Patient Registrar.*
Miss Margaret McGovern, *Dietitian.*

SOUTH DEPARTMENT.

John J. Dowling, M. D., *Medical Director.*
Edwin H. Place, M. D., *Physician-in-Chief.*
Miss Edith M. Grant, *Assistant Superintendent of Nurses and Matron.*

SANATORIUM DIVISION.

Arthur J. White, M. D., *Assistant Superintendent.*
Frank H. Hunt, M. D., *Resident Medical Officer.*
Miss Margaret J. Chisholm, *Superintendent of Nurses.*

HAYMARKET SQUARE RELIEF STATION.

Bernard F. Devine, M. D., *Resident Surgeon.*
George Robbins, M. D., *Assistant Resident Surgeon.*
Miss Agatha P. McKenna, *Matron.*

EAST BOSTON RELIEF STATION.

Arthur G. Holland, M. D., *Resident Surgeon.*

Harry L. Dougherty, M. D., *Assistant Resident Surgeon.*

CONVALESCENT HOME.

Miss Elizabeth C. Fairbank, *Matron.*

MEDICAL AND ADMINISTRATIVE ASSISTANTS.

Stanley J. G. Nowak, M. D., *Resident Surgeon, Fifth Surgical Service.*

Richard Berg, M. D., *Resident Surgeon, Sixth Surgical Service.*

Maxwell Finland, M. D., *Resident Physician, Second Medical Service.*

Ben Arbor, M. D., *Resident Physician, Pediatric Service.*

Wilmot C. Townsend, M. D., *Resident Physician, for Tropical Diseases.*

H. Houston Merritt, M. D., *Resident Physician, Neurological Service.*

Frederic Parker, Jr., M. D., *Assistant Pathologist.*

Harold E. MacMahon, M. D., *First Assistant in Pathology.*

Robert A. MacKeen, M. D., *Second Assistant in Pathology and Visiting Pathologist at Sanatorium Division.*

Douglas M. Gay, M. D., *Third Assistant in Pathology.*

George K. Mallory, M. D., *Fourth Assistant in Pathology.*

William R. Ohler, M. D., *Assistant in Clinical Pathology.*

Allan G. Rewbridge, M. D., *Resident Assistant in Pathology.*

Edward A. Burkhardt, M. D., *Resident Assistant in Pathology.*

Robert N. Nye, M. D., *Assistant in the Thorndike Laboratory.*

Hermann L. Blumgart, M. D., *Assistant in the Thorndike Laboratory.*

Soma Weiss, M. D., *Assistant in the Thorndike Laboratory.*

John S. Lawrence, M. D., *Assistant in the Thorndike Laboratory.*

Henry Jackson, Jr., M. D., *Assistant in the Thorndike Laboratory.*

Gulli Lindh Muller, M. D., *Assistant in the Thorndike Laboratory.*

William B. Castle, M. D., *Assistant in the Thorndike Laboratory.*

Albert W. Bromer, M. D., *Resident Physician, Thorndike Laboratory.*

Lawrence B. Ellis, M. D., *Assistant Resident Physician, Thorndike Laboratory.*

Stacey R. Mettier, M. D., *Assistant Resident Physician, Thorndike Laboratory.*

Clark Heath, M. D., *Assistant Resident Physician, Thorndike Laboratory.*

Max Ritvo, M. D., *Assistant Roentgenologist.*

Frederick W. O'Brien, M. D., *Assistant Roentgenologist.*

Edmund F. Walsh, M. D., *Clinical Bacteriologist.*

Joseph Resnik, M. D., *Assistant Physician for Physical Therapeutics.*

Samuel S. Ellis, M. D., *Assistant Resident Physician, Thorndike Laboratory, and Volunteer Assistant, Fourth Medical Service.*

Eugene C. Glover, M. D., *Assistant Resident Physician, Thorndike Laboratory.*

Albert G. Young, M. D., *Assistant Resident Physician, Thorndike Laboratory.*

F. H. L. Taylor, M. D., *Assistant Resident Physician, Thorndike Laboratory.*

SOUTH DEPARTMENT.

Morris Prizer, M. D., *Assistant Physician.*

Charles T. Hinshaw, M. D., *Assistant Physician.*

Charles E. Dyer, M. D., *Assistant Physician.*

SANATORIUM DIVISION.

Jacob F. Belin, M. D., *Assistant Resident Medical Officer.*

Walter M. O'Brien, M. D., *Assistant Resident Medical Officer.*

Morris L. Grover, M. D., *Assistant Resident Medical Officer.*

REPORT OF THE TRUSTEES.

BOSTON, January 7, 1929.

HON. MALCOLM E. NICHOLS,

Mayor of the City of Boston.

SIR,—In compliance with the ordinances, the trustees of the Boston City Hospital present the following report of its condition for the year ending December 31, 1928.

This is the sixty-fifth annual report of the Hospital Department which consists of the Main Hospital, the South Department for contagious diseases, the Sanatorium Division, the Haymarket Square Relief Station, the East Boston Relief Station, the Convalescent Home in Dorchester and the West Department.

The Board of Trustees was organized on May 7, 1928, by the election of Mr. Joseph P. Manning as president and Dr. Henry S. Rowen as secretary.

Mr. Thomas A. Forsyth, Secretary to the Board of Trustees, passed away in March. The resolutions of the trustees upon this sad event are recorded on another page.

In May Mr. Alexander Whiteside was appointed to the Board of Trustees for the remainder of the term ending April 30, 1929.

EXPENDITURES.

The total expenditures for all departments of the Hospital, excepting the Sanatorium Division, during the fiscal year were \$2,185,628.51. Of the total operating expenses \$1,542,779.78 was expended upon the hospital proper and its subdivisions; \$192,804.54 on account of the Out-Patient Department; \$297,944.09 on account of the South Department; \$84,686.09 on account of the Haymarket Square Relief Station, \$42,506.78 on account of the East Boston Relief Station; \$19,654.06 for the

Convalescent Home and \$5,253.17 for the West Department. Of the amount spent on Pathological Laboratory, \$44,728.83, \$38,466.80 is included in the hospital proper expenditures, \$1,789.15 in the Out-Patient Department, and \$4,472.88 in the South Department expenditures. The entire amount spent on the Thorndike Memorial Laboratory, \$69,460.64, is included in the hospital proper expenditures. Of the total amount spent on the X-Ray and Photographic Department, \$66,317.62, \$30,506.11 is charged to the hospital proper and \$35,811.51 to the Out-Patient Department. Of the total amount spent on the Department of Physical Therapeutics, \$20,499.28, \$2,459.91 is charged to the hospital proper and \$18,039.37 to the Out-Patient Department. Of the total amount spent on the Clinical Laboratory, \$9,652.67, \$6,370.76 is charged to the hospital proper and \$3,281.91 to the Out-Patient Department. Of the amount spent in the Blood Laboratory, \$2,363.68, \$1,370.93 is charged to the hospital proper and \$992.75 to the Out-Patient Department. Of the amount spent on the Department of Immunology, \$5,505.23, \$110.10 is charged to the hospital proper and \$5,395.13 to the Out-Patient Department. Of the amount spent on the Department of Oral Surgery, \$1,482.31, \$400.22 is charged to the hospital proper and \$1,082.09 to the Out-Patient Department. Of the amount spent on the Department of Social Work, \$22,117.79, \$11,058.90 is charged to the hospital proper and \$11,058.89 to the Out-Patient Department, the Social Work of the South Department being almost entirely financed by the private committee. Of the amount spent in ascertaining the settlement of patients, \$1,970.66, \$1,832.71 was spent on the hospital proper and \$137.95 on the South Department. The expenditures of the Sanatorium Division have been \$380,882.70 during the year, the details being shown on the various tables.

In Table No. 2 the expenditures on the hospital proper and the South Department are combined under the title "Main Hospital."

The methods of obtaining the per capita cost in the various departments are shown in Tables No. 1 and No. 2 of the Superintendent's report. From the total operating expenses are deducted the increases in stock on hand at the end of the year over that at the beginning of the year (or the decreases are added, as the case may require). There is also deducted the cost of permanent improvements and other extraordinary expenditures (alterations to South Department laundry, painting Nurses' Home, connecting up fixtures in Nurses' Home, and the following installations: wire guards around laundry machines, elevator, electric operating valve contacts, elevator gate, piping, etc., in Burnham Building elevator, sump pit in basement of Thorndike Laboratory, gypsum block partitions in Thorndike Laboratory, sprinklers in temporary wooden corridor, iron door in storage house, steel shelving in Out-Patient record room). This gives the amount properly chargeable to maintenance. This cost of maintenance is divided by the number of days' board given ward patients or the number of visits of out-patients, to obtain the per capita cost per patient.

The per capita cost at the hospital proper was \$4.51 per day for ward patients; at the South Department, \$4.90, but taking the hospital proper and the South Department together, the per capita cost per ward patient was \$4.57. At the Convalescent Home, the per capita cost per patient was \$3.66 per day. The cost of out-patients per visit was 66 cents at the hospital proper, \$2.70 at the Haymarket Square Relief Station and \$1.92 at the East Boston Relief Station. The cost of uncooked food supplies for the hospital in all its departments has been \$3.83 per person per week or 55 cents per day.

PAYING PATIENTS.

During the past year there has been collected for the care and treatment of patients of all classes excepting those at the Sanatorium Division the sum of \$201,276.72, itemized as follows: There was received from the Com-

monwealth of Massachusetts for the board of patients at the hospital proper, \$26,063.88; for the board of patients at the South Department, \$109.50; from various cities and towns for hospital proper, \$29,104.13; collected at the Superintendent's Office, on account of private room, ward and Out-Patient Department paying patients, \$106,845.41, of which \$17,537.77 was from insurance cases; for board of paying patients at the South Department, \$6,834.59; on account of ward and Out-Patient Department paying patients at the Haymarket Square Relief Station, \$4,467.28, of which \$1,917.95 was from insurance cases; on account of ward and Out-Patient Department paying patients at the East Boston Relief Station, \$178.43, \$126 of this being from insurance cases. There was also collected in all departments \$5,555.53 on account of insurance cases, \$2,607 of this being from X-ray cases and \$2,948.53 being from clinical record fees.

There has also been collected for the hospital by the Health Department, for the care of contagious cases at the South Department, and paid to the City Collector the additional sum of \$22,117.97. \$96,791.06 of the income from paying patients was collected by the Overseers of the Public Welfare. The revenue was increased \$14,206.90 by X-ray charges; it was increased \$10,378.35 by physiotherapy charges. It was also increased \$45,915.76 by out-patient treatment, removal of tonsils and adenoids, electro-cardiograms, skin treatment, issuing of *ex-officio* statements, fees for insulin, record fees and payment of nurses' board.

For the care and treatment of patients at the Sanatorium Division there has been collected from the Commonwealth of Massachusetts \$73,954.75; from cities and towns \$96.25; from paying patients \$324.75, making a total of \$74,375.75.

A table showing the revenue received from paying patients, interest on trust funds, sale of old material and other sources, will be found on page 156 of the Superintendent's report.

The following is a tabular statement of the income from paying patients:

	Hospital Proper.	South Department.	Haymarket Square Relief Station.	East Boston Relief Station.	All Departments, except Sanatorium Division.	Totals, All Departments, except Sanatorium Division.	Sanatorium Division.
Collected at the Hospital:							
From the state.....	\$26,063 88	\$109 50	.....	.....	.....	\$26,173 38	\$73,954 75
From cities and towns....	29,104 13	.....	.....	.....	.....	29,104 13	96 25
From ward and private room patients:							
Miscellaneous cases....	67,652 39	6,834 59	\$2,306 33	\$40 43	.....	76,833 74	324 75
X-ray cases.....	11,344 90	.....	243 00	12 00	.....	11,599 90	.....
Physiotherapy cases....	10,310 35	.....	.....	.....	.....	10,310 35	.....
From insurance cases:							
House cases.....	16,261 77	.....	511 95	.....	.....	16,773 72	.....
Out-patient cases.....	1,276 00	.....	1,406 00	126 00	.....	2,808 00	.....
X-ray cases.....	.....	.....	.....	.....	\$2,607 00	2,607 00	.....
Record fees.....	.....	.....	.....	.....	2,948 53	2,948 53	.....
Totals.....	\$162,013 42	\$6,944 09	\$4,467 28	\$178 43	\$5,555 53	\$179,158 75	\$74,375 75
Collected by City Collector for contagious cases.....	.....	22,117 97	.....	.....	.....	22,117 97	.....
Totals.....	\$162,013 42	\$29,062 06	\$4,467 28	\$178 43	\$5,555 53	\$201,276 72	\$74,375 75

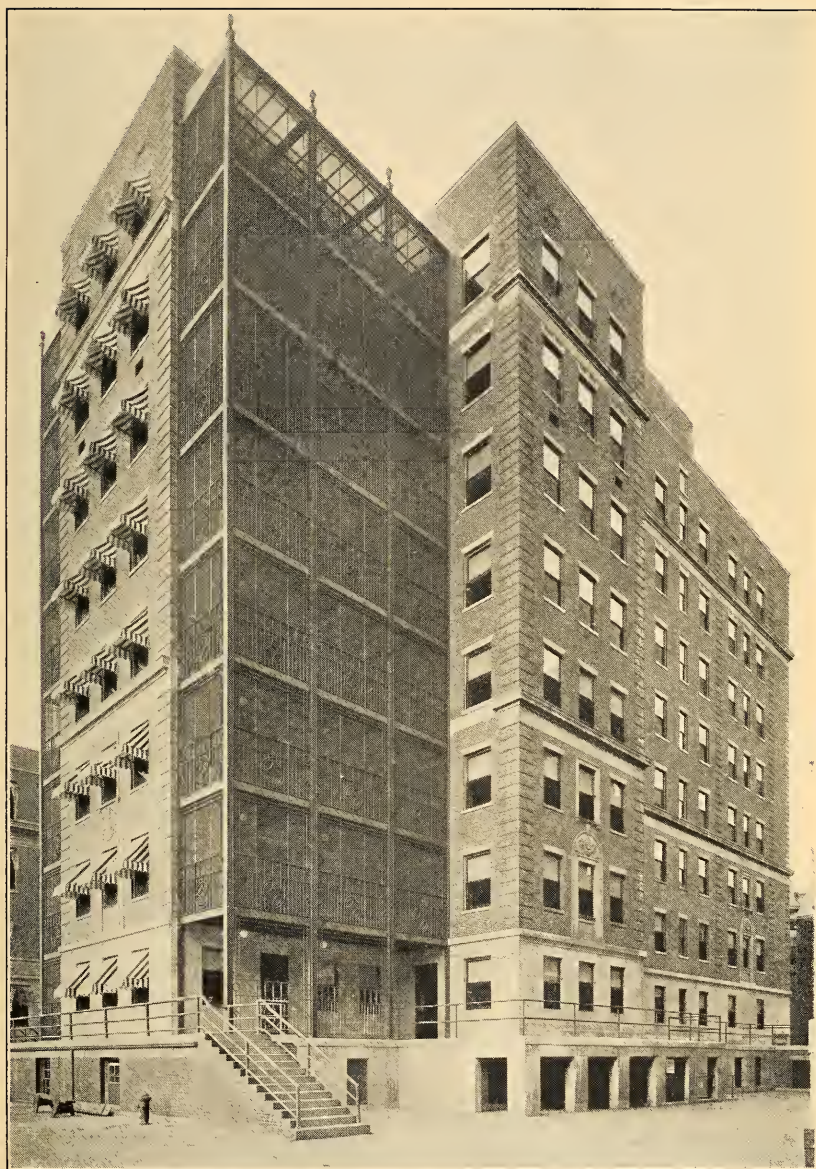
HOSPITAL BUILDINGS, PLANS, ETC.

Of the appropriation of \$180,000 granted for plans, sketches, architects' fees, etc., for new buildings, \$151,025.13 has been expended to January 1, 1929, in connection with Maternity Building, additions and alterations to Nurses' Home and Power Plant, New Surgical Building, House Officers' Building and Medical Pavilion.

NEW SURGICAL BUILDING.

The New Surgical Building was accepted by the trustees as completed on September 10, 1928, and on October 22 the first patients were entered in the Accident Ward.

This building is of steel construction, eight stories



NEW SURGICAL BUILDING

and basement, brick with limestone trimmings, and built in the form of a Roman cross.

The basement contains the indoor branch of the Department of Physical Therapeutics, with rooms for baking, massage, muscle training, light therapy, arm and leg baths, douches and showers, with cabinets for electric baths. In the rear is a large plaster room, in which all plaster casts for this building and for other parts of the hospital are put on.

There are two elevators, one for passengers and one for service, also a dumb-waiter.

The first floor is an accident ward, and is divided for males, females and children, with each bed in a cubicle. On this floor also are two shock rooms, for patients entering the hospital in surgical shock. Each contains three beds, one of the rooms being for males and one for females; and between these rooms is a small operating room for transfusions.

There are four floors for female patients and three for male patients. Each ward contains twenty-eight beds and is flooded with sunlight all day long.

On each floor there is a dressing room 9 by 12 feet, in which major dressings are done. There are also four rooms which may be used for either isolation or private rooms.

Following is a statement of its finances:

NEW SURGICAL BUILDING.

Appropriation	\$679,500 00
Expenditures	634,209 31
	<hr/>
	\$45,290 69
Transferred to House Officers' Building	1,576 09
	<hr/>
Balance on hand January 1, 1929	<u>\$43,713 79</u>

New Surgical Building, Furnishing and Equipping.

Appropriation	\$38,000 00
	<hr/>
<i>Carried forward</i>	<i>\$38,000 00</i>

<i>Brought forward</i>	\$38,000 00
Transferred from:	
Thorndike Memorial Building, furnishing and equipping	1,018 29
Out-Patient Building, furnishing and equipping	11,609 29
Maternity Building, furnishing and equipping,	10,891 92
Nurses' Home, furnishing and equipping	10,583 44
City Hospital improvements	1,047 48
City Hospital Research Laboratory	2,370 56
Nurses' Home, additions and alterations	3,669 04
Nurses' Home, furnishing and equipping	288 73
The Thorndike Memorial	621 48
	<hr/>
	\$80,100 23
Expenditures through December 31, 1928	66,204 90
	<hr/>
Balance on hand	<u>\$13,895 33</u>

NEW RESIDENCE FOR HOUSE OFFICERS.

The House Officers' Building is now completed, and when furnished will be ready for occupancy. It is a brick building of seven stories and basement, with limestone trimmings.

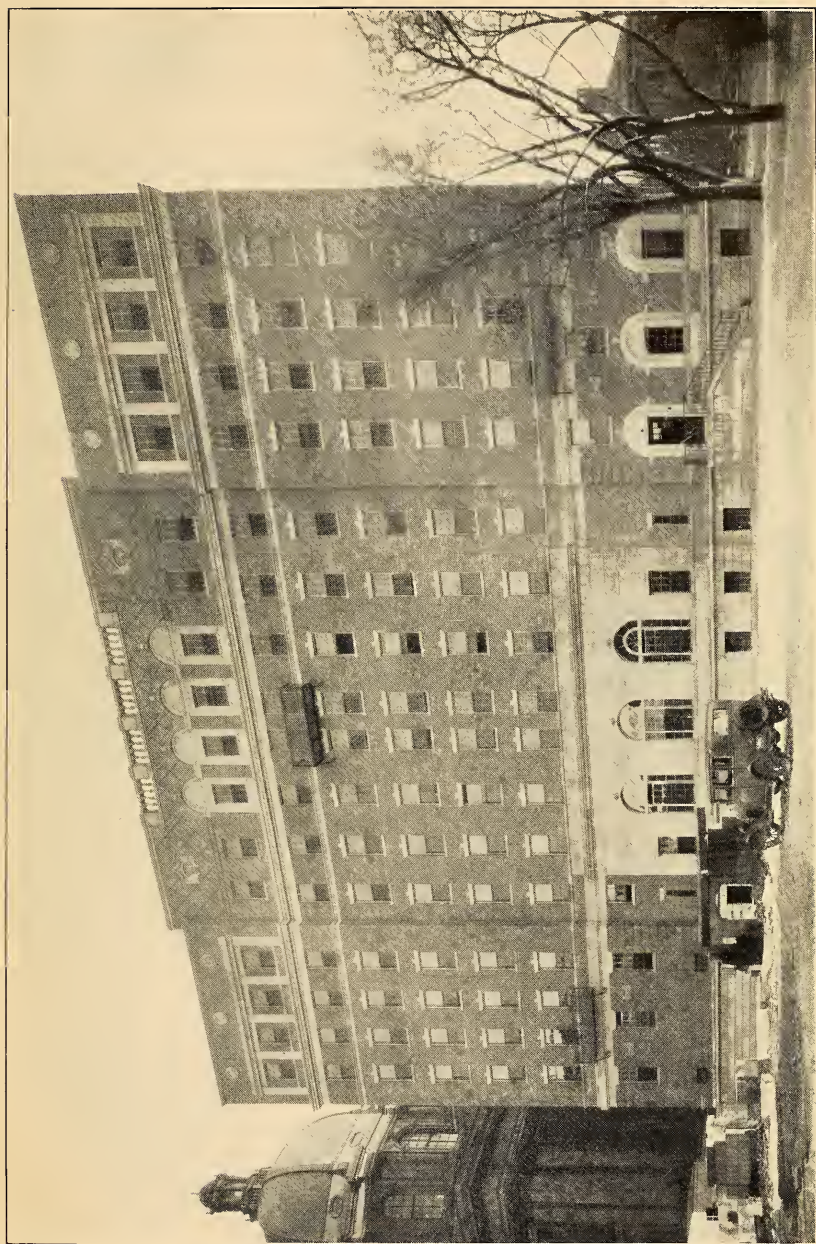
The basement contains two squash courts, a swimming pool, dressing rooms, locker rooms and showers.

The dining room is on the first floor. This is a very dignified room and is so built that it may be used as a cafeteria when desired. There are galleries for the squash courts on this floor, also a new five-position switchboard has been installed, thus relieving the executive office of the noise and confusion attending a switchboard.

On the mezzanine floor an apartment of five rooms has been built for the assistant superintendent, also a lounge and card room, and a quiet room for reading.

The building contains one hundred twenty-eight rooms for house officers and residents.

On the southeast and southwest corners of the top floor are sun rooms.



HOUSE OFFICERS' BUILDING

A statement of finances follows:

House Officers' Building.

Original appropriation	\$462,000 00
Loan order rescinded	27,000 00
	<hr/>
	\$435,000 00
Transferred from New Surgical Building . . .	1,576 90
Transferred from Maternity Building . . .	569 57
	<hr/>
	\$437,146 47
Expenditures through December 31, 1928 . . .	357,656 64
	<hr/>
Balance on hand January 1, 1929	<u>\$79,489 83</u>

No special appropriation was granted for furnishing the House Officers' Building but this expense will be taken care of in the regular hospital appropriation.

ALTERATIONS TO WARDS F, G AND H.

The alterations to this building, accepted as completed on January 31, 1928, were as follows:

The service end of Wards F, G and H was demolished and the service transferred to the northwest end of the building so that the temporary needs of the building might be cared for here until the new Medical Pavilion is completed. A new electric elevator was installed and the fire escape transferred to the southeast corner. A temporary wooden connecting corridor from the Centre Building to the basement of Wards F, G and H was constructed, and a doorway installed opposite the Entrance Lodge, so that the friends of patients might have easy access to the wards.

A statement of the cost of this follows:

Alterations to Medical Pavilion (Wards F, G and H).

Appropriation	\$60,000 00
Expenditures	42,710 47
	<hr/>
Balance on hand	<u>\$17,289 53</u>

POWER PLANT, ADDITIONS AND ALTERATIONS.

The contract for part of the work to be done, which was awarded to Rideout, Chandler & Joyce, was

completed and accepted by the trustees on February 4, 1928. On March 21, 1928, bids were opened for the balance of the work to be done, and this contract was awarded to M. S. Kelliher Company for \$158,766. Later on in the year 1928, two additions were made to this contract, which made the total amount of the contract to date \$205,981.32. It is expected that this work will be completed sometime in February, 1929.

Original appropriation	\$225,000 00
Additional appropriation	63,000 00
	<hr/>
Total amount appropriated	\$288,000 00
Expended through December 31, 1928	245,170 18
	<hr/>
On hand January 1, 1929	<u>\$42,829 82</u>

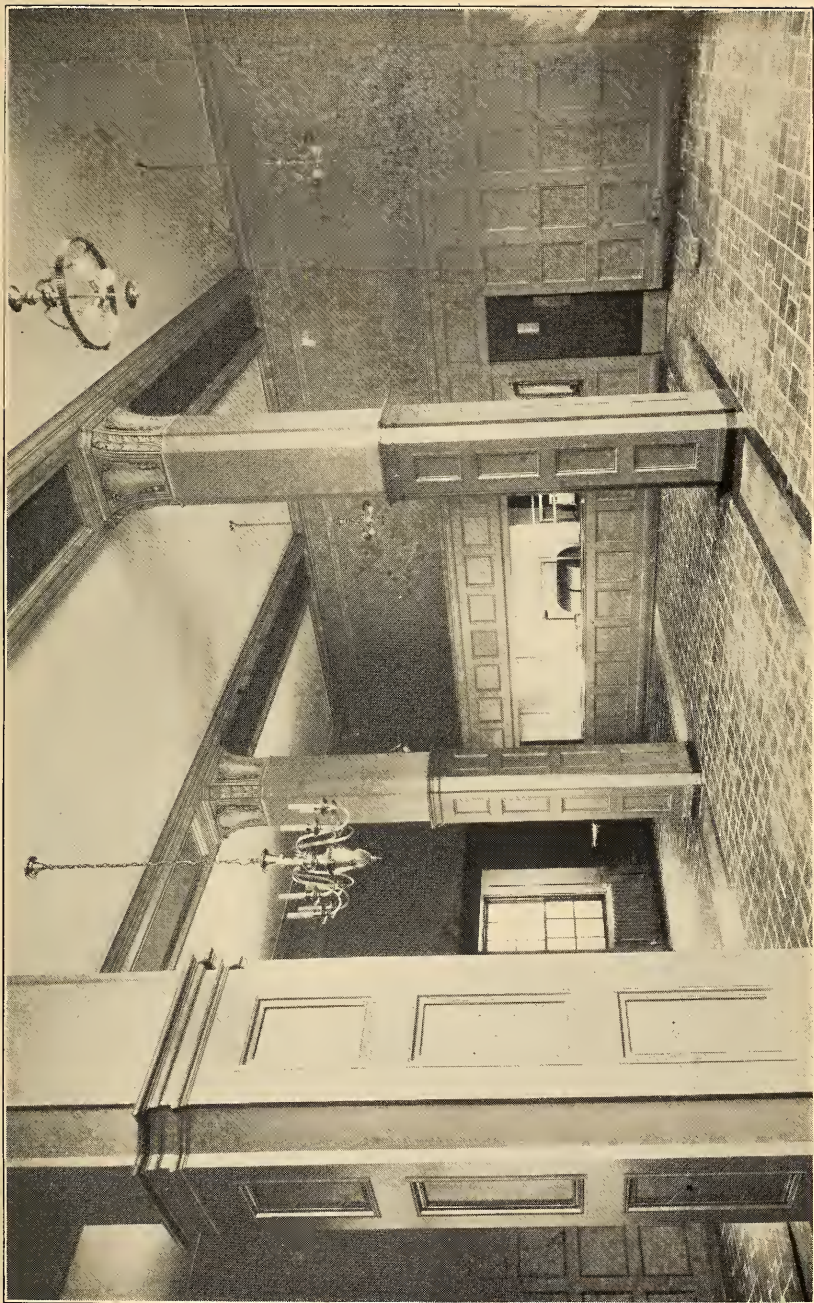
The Hospital Power House furnishes steam to the Boston Water Department Building adjoining the hospital property on Albany street. This has been done since November, 1923. In return, the Water Department pays its proportionate part of the cost of fuel oil used for maintenance of the heat and power plant. During the year 1928 the Water Department paid \$3,506.40 for this.

THE THORNDIKE MEMORIAL.

. The balance on hand December 31, 1927, \$621.48, was transferred to the appropriation for Surgical Building, furnishing and equipping.

Thorndike Memorial Laboratory, Furnishing and Equipping.

Loan appropriation	\$65,000 00
Transferred to the Thorndike Memorial	8,000 00
	<hr/>
	\$57,000 00
Expenditures	55,981 71
	<hr/>
	<u>\$1,018 29</u>
Transferred to Surgical Building, furnishing and equipping	<u>\$1,018 29</u>



HOUSE OFFICERS' RESIDENCE.—DINING ROOM

OUT-PATIENT BUILDING (CITY HOSPITAL IMPROVEMENTS).

The balance on hand December 31, 1927, of \$1,047.48 was transferred to the Surgical Building, furnishing and equipping.

Out-Patient Building, Furnishing and Equipping.

Appropriation	\$70,000 00
Expenditures	58,390 71
	<hr/>
	\$11,609 29
Transferred to Surgical Building, furnishing and equipping	11,609 29
	<hr/>

Maternity Building.

Appropriation	\$750,000 00
Order rescinded limiting debt limit to \$585,000 — deduct	165,000 00
	<hr/>
	\$585,000 00
Expended through December 31, 1928	584,430 43
	<hr/>
	\$569 57
	<hr/>
Transferred to House Officers' Building	\$569 57
	<hr/>

Maternity Building, Furnishing and Equipping.

Appropriation	\$70,000 00
Expenditures	59,108 08
	<hr/>
	\$10,891 92
Transferred to Surgical Building, furnishing and equipping	10,891 92
	<hr/>

Nurses' Home, Additions and Alterations.

Original appropriation	\$408,000 00
Additional appropriation	15,000 00
	<hr/>
	\$423,000 00
Expenditures	419,330 96
	<hr/>
Balance on hand December 31, 1928	\$3,669 04
Transferred to Surgical Building, furnishing and equipping	\$3,669 04
	<hr/>

Nurses' Home, Furnishing and Equipping.

Appropriation	\$40,000 00
Expended through December 31, 1928	29,127 83
	<hr/>
	\$10,872 17
Transferred to New Surgical Building, furnishing and equipping	10,583 44
	<hr/>
Balance on hand December 31, 1928	<u>\$288 73</u>
Transferred to Surgical Building, furnishing and equipping	<u>\$288 73</u>

SPECIAL LABORATORY AND ANIMAL HOUSE.

The balance of \$2,370.56 on hand December 31, 1927, was transferred to the appropriation for Surgical Building, furnishing and equipping.

SANATORIUM DIVISION.

On May 22, 1928, a loan appropriation of \$1,400,000 was granted for new buildings and additions and equipment and furniture at Sanatorium Division.

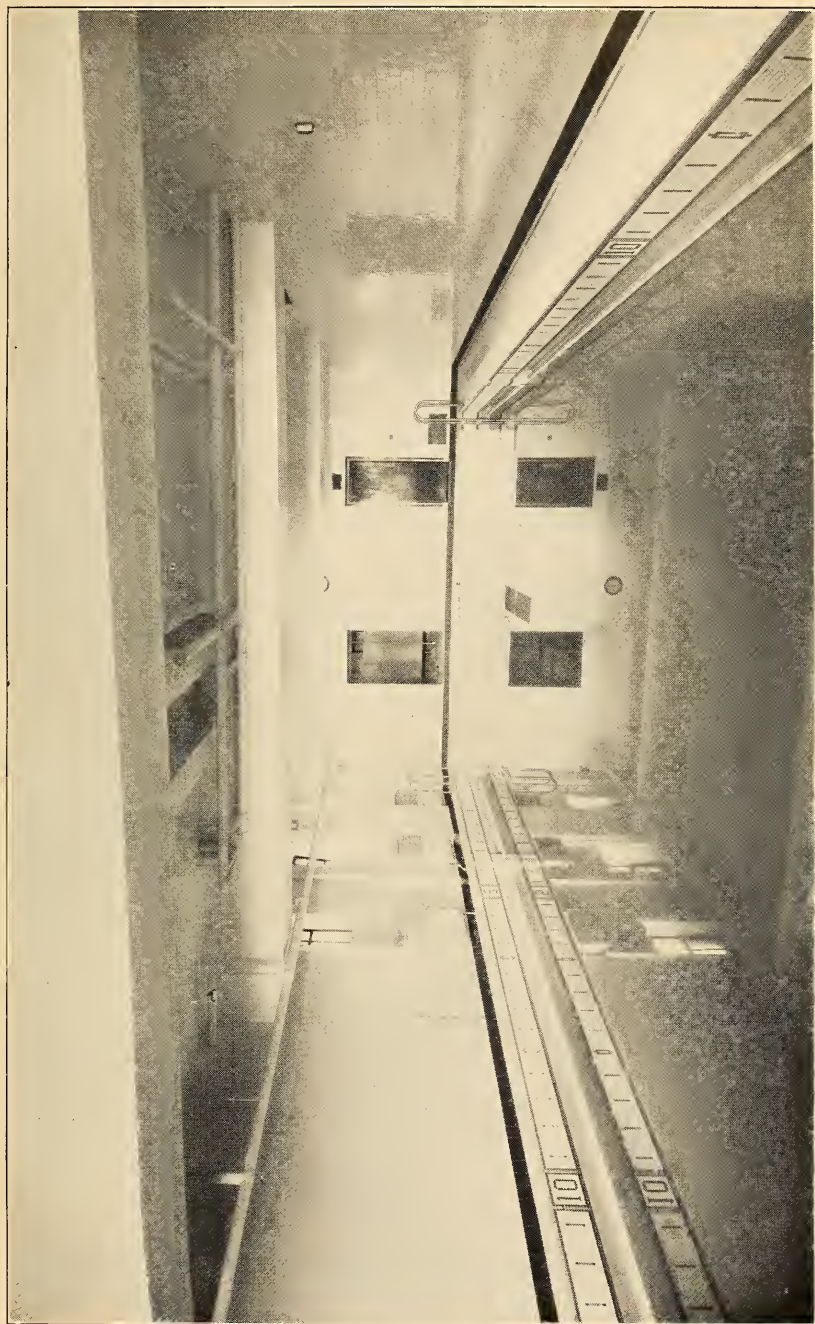
On November 13, 1928, bids were opened for Men's and Women's Open-Air Ward Buildings and on November 26, 1928, the contract was awarded to J. A. Singarella for \$148,240 for both buildings.

On December 20, 1928, bids were opened for erection and completion of Nurses' Home. The Trustees are now awaiting the approval of the Mayor to award the contract to L. S. Koufman & Co., the lowest bidders, at \$143,000.

Plans are also under way for erection of a new admission building, bids for which will soon be opened.

James H. Ritchie and Associates are the architects for all of these buildings.

Appropriation	\$1,400,000 00
Expended through December 31, 1928	14,990 74
	<hr/>
Balance on hand December 31, 1928	<u>\$1,385,009 26</u>



HOUSE OFFICERS' BUILDING — SWIMMING POOL

OUT-PATIENT DEPARTMENT.

The following is a report on the advancement of Out-Patient activities established during the years 1926 and 1927, and the creation of new activities during the year 1928. The appointment system, the check-up system, the check-up method of admitting new cases, have all continued as before. They are now firmly established in the routine of the Out-Patient Department, and have been of great aid in maintaining the high standard of efficiency.

The appointment system is admirably suited to dispensary work. It gives it a flexibility which cannot possibly exist under the old system. It allows the working personnel to be motile, and more usable at will. We have experimented in the department of applied immunology. This clinic, which formerly functioned during the early hours of the morning, has been changed so that it runs from 11 a. m. to 1 p. m. The clerk in this clinic is able to do the work here after completing her work in one of the early morning clinics. The patients of this clinic, who are mostly chronic asthmatics, are much better served by a clinic which makes it possible for them to obtain treatment at noon.

On February 14, 1927, collecting money for physiotherapy treatment was begun, collections of that year amounting to \$9,269.90, and of the year 1928 to \$10,306.50. On June 12, 1928, collecting money for bismuth was begun. The amount collected for the year ending December 31, 1928, was \$352.45. On March 21, 1928, collecting money for insulin was begun, this amounting to \$745.49 during 1928.

An economic survey of all new out-patients was started in December, 1927, and continued into the first part of 1928. One thousand three hundred forty-eight cases were interviewed. From each case the following data was taken — name, address, age, number of people in family, wage of each, amount contributed to the support of the home, number of dependents, amount of insurance carried, amount of out-standing debts. From

these facts it was determined in which one of the following classes the patient belonged — free, able to pay a small admission fee, or able to pay a private doctor.

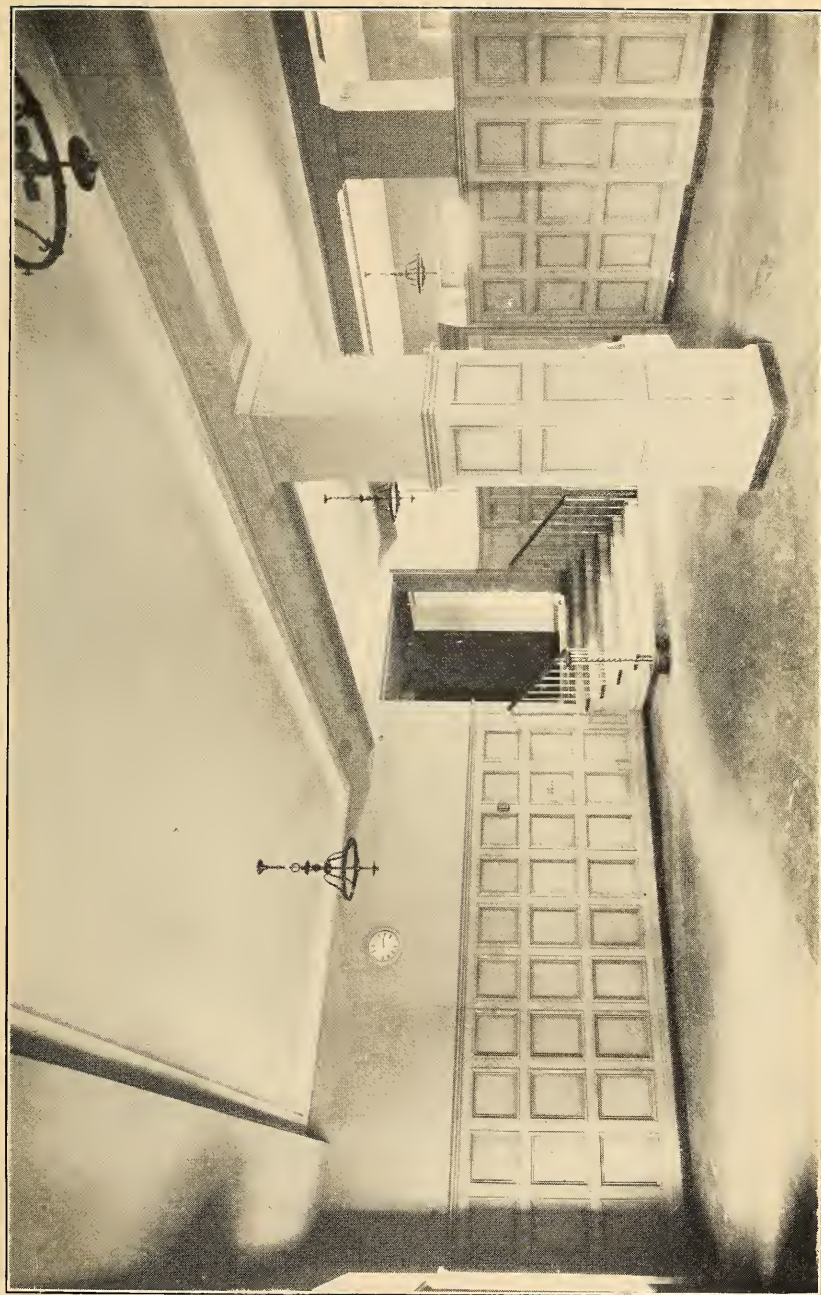
NUMBER OF CASES.	Class.	Per Cent.
837.....	Able to pay admission fee.....	62
79.....	Able to pay private doctor.....	5
432.....	Unable to pay anything.....	33

During 1926 and 1927, follow-up clinics were established and maintained in the Out-Patient Department. The aim of this clinic is to afford members of the House Staff an opportunity to carry on investigation in any particular group of cases in which they are interested. During 1928 more clinics of this kind were started, and we feel that interest in this work is increasing each year.

During the past year, the activities of the Gastro-Intestinal Department have increased to a point where it has been necessary to hold the clinic twice a week instead of once a week as formerly.

During the past year a food clinic has been established in conjunction with the diabetic clinic. Also a goitre clinic was established. This is held every Friday morning.

Student nurses are now being assigned to the Out-Patient Department for a definite period of six weeks. During their stay in the Out-Patient Department an attempt is made to teach them as much as possible. They have the opportunity to work in several clinics, are given time to observe various procedures such as metabolism tests, gastro-analyses, ultra violet ray treatment, Bismuth and Salvarsan treatments, and are allowed to have conferences with the Social Service workers relative to their work. Special printed forms are available in each clinic on which the nurse records the observation and training which she has received in



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that department. The nurse in charge supervises her training and makes a report of her work. These records are forwarded to the training school office and placed on file.

The Department of Immunology still carries on its work of immunization of Hospital employees. During the past year it has actively taken up the problem of immunization against respiratory infections. There is not at this time sufficient data to justify any expression of opinion as to its value. There is, however, sufficient information now at hand to demonstrate the value of this work in typhoid, diphtheria and scarlet fever.

From 1901 to 1910, the incidence of typhoid fever among nurses was 4,400 per 100,000, while the city morbidity for the same period averaged 140 per 100,000. Pupil nurses were thirty times as apt to contract typhoid fever as were the inhabitants of the city at large. Since 1911 all nurses have been protected against typhoid fever upon their admission to the Hospital. The morbidity was at once reduced to zero, and has remained zero up to the present date.

From 1915 to 1920 there were 64 cases of diphtheria at the South Department. This was a morbidity of 18,000 per 100,000, and was 600 times that of the city population of the same age, and during the same period. Immunization against diphtheria was instituted in 1921, and since then there has been but one mild and doubtful case. The use of the Schick test and immunization has wiped out diphtheria as a disease among nurses at the South Department

Scarlet fever immunization was instituted among nurses during 1924. During the four previous years there were four cases of scarlet fever among 89 nurses. From 1924 to 1927, among 104 pupil nurses who were immunized against scarlet fever, one case developed. The result of inoculation against scarlet fever has been practically to wipe out the disease among nurses who are massively exposed to the infection at the South Department.

AFTERNOON MEDICAL OUT-PATIENT CLINIC.

The Afternoon Medical Out-Patient Clinic, under the superintendence of Dr. James W. Manary and the management of Dr. Soma Weiss, under Doctor Minot's directorship, became operative on October 15, 1928, and is now an important unit of the Hospital. Three physicians, one serving as resident, together with three to four fourth-year medical students undertake the work of the clinic three afternoons a week.

The clinic renders service to patients whose problems require more than the average amount of personal attention that patients require from physicians.

In addition to the main clinic, groups of special cases are also seen, as for example, anemia patients by Doctor Castle and patients with certain neoplastic conditions by Doctor Jackson. The clinic furthermore serves to care for the patients discharged from the fourth Medical Service. Formerly these patients have been seen only by House Officers but now they obtain the advice of both house physicians and more mature physicians. This has enabled a very definite improvement in the liason service between the work of the wards and the work of the Out-Patient Department.

The patients treated at the clinic have been received mainly from the morning medical and the neurological clinics. Some have come from other clinics of the Out-Patient Department and from the Thorndike Ward.

During a period of two and one half months (October 15 to December 31, 1928) 221 patients have been treated. The total number of visits has been 513. Of the 221 patients 40 had been on the wards of the fourth medical service and 12 were referred to the wards of the Hospital. Undoubtedly a number of patients seen in the clinic were spared from entering the wards by the nature of the studies made and the time devoted to them.

Some simple routine investigative problems are being studied by men working in the clinic in an effort to

learn more about early symptoms and early diagnosis of disease and to thus lead to better treatment of patients and the prevention of disease.

It is hoped that the efficiency and the standards of the clinic will constantly increase and now that it has become established and technical aid is anticipated, considerable progress and expansion can be expected.

MEDICAL DEPARTMENT.

Six thousand six hundred and eighty-three ward patients have been treated in the Medical Services during the year and nine thousand one hundred thirteen medical out-patients have been treated. Twenty-seven thousand two hundred sixty visits have been made by these out-patients to the Hospital for treatment and advice.

FOURTH MEDICAL SERVICE.

The routine work of the Fourth Medical Service has been conducted on essentially the same basis as in previous years and with the same ideals always in view of raising the general standard of work year by year. To this end the spirit of study and investigation has been encouraged at all times since it is our belief that the service which fosters such activities inevitably provides for the most thorough study of disease, and hence gives the best care to the patient.

A very important function of the Hospital Ward is the opportunity it offers for instruction to medical students, and by arrangement with the Harvard Medical School, fourth year students are regularly assigned to the service for periods of from one to three months. These students, as clinical clerks, form an integral part of the Staff, and thus contribute to the effectiveness and completion of the work.

In many instances patients representing especial problems in diagnosis or therapy have been transferred to the ward of the Thorndike Memorial Laboratory, in order to give the patient the advantage of the unique

facilities provided there. It is this close connection between the research laboratory and the actual clinical service which means the strength of each.

In addition to the investigative work reported for the Thorndike Memorial Laboratory, a part of which resulted from studies conducted on the Fourth Medical Service, Drs. Locke, M. Fremont-Smith and Reynolds, members of the Visiting Staff but not of the Thorndike Laboratory, have studied and are studying several clinical problems; for example, certain aspects of peptic ulcer and psychoneurosis.

It is a pleasure to commend the efficient and faithful work of the internes. Undoubtedly they have had more work to perform than is wise for a progressive physician to do and they have served often many hours when officially they were "off duty." Success depends frequently upon time for reflection and careful thought which cannot take place when there are excessive demands leading to chronic fatigue; a condition tending to be imposed on the House Officers. It is anticipated, however, that this will be rectified in the future by the addition of another House Officer to the service and the opening of the splendid new House Officers' quarters.

SURGICAL DEPARTMENT.

Including the fracture and the genito-urinary cases, 21,928 out-patients have been treated and 7,691 accident cases have been cared for. These out-patients, exclusive of the accident cases, made 102,995 visits for advice and treatment. The visits of accident cases numbered 7,691. Seven thousand nine hundred and sixty-four surgical patients have been treated in the wards.

SIXTH SURGICAL SERVICE.

The Sixth Surgical Service has been functioning since September, 1928.

It is now moved into the new Surgical Building, admirably situated and equipped; the patients are

taken care of by nurses responsible to the Visiting Staff. This is not only pleasant but enormously important in carrying out any surgery, but particularly the type of surgery coming to the Sixth Surgical Service.

The new Staff, Resident and House Officers, have done admirable work and for a considerable time have done it under the unavoidable and uncomfortable handicap of having cases scattered all over the Hospital. We are now looking forward to an opportunity of service which we much appreciate.

New rules will keep this service from being swamped with fractures.

Connected with this service is the clinic which has been held for the past three and a half years in the Out-Patient Department on Friday mornings, a reference and consultation clinic which has proved of great value. Arrangements have just been completed whereby the Fourth Surgical Service is to have an Out-Patient Follow-up Clinic on Wednesday mornings to check up all cases.

Another innovation is projected, not yet carried through, namely, the utilization of these special Out-Patient Clinics for teaching Harvard Medical students, valuable without question, if the school's schedule can be arranged to get the students here.

GYNECOLOGICAL AND OBSTETRICAL SERVICE.

The Gynecological and Obstetric Service has been extremely busy during the past year.

There were 1,413 gynecological cases admitted to the House.

The operative work performed was as follows: Abdominal operations, 314; vaginal plastic operations, 48; total minor operations, 595.

There were 1,588 obstetric cases admitted to the House. The total number of deliveries was 1,418. The Out-Patient Department referred 1,184 of these cases to the House, leaving 220 cases coming from various other sources.

In the Out-Patient Department the number of new gynecological patients was 917. The number of new obstetric patients was 857. The total number of new patients was 1,774. Number of visits of new and old gynecological patients was 4,502. Number of visits of new and old obstetric patients was 4,548. Total number of visits was 9,050.

The work of the Visiting Staff, the House Staff and the Nursing Staff has been satisfactory. Helpful co-operation has been obtained from the Department of Social Service.

Lectures to nurses have again been given by the Visiting Staff, 36 in obstetrics and 8 in gynecology.

Teaching for the Harvard Medical School in gynecology and obstetrics and for the Tufts Medical School in obstetrics has continued.

The department appreciates more and more the new opportunities for increased accomplishment with greater efficiency in the new building.

NEUROLOGICAL SERVICE.

The clinical work on Ward J has gone very well this year with the exception of the months of May, June and July, when it was impossible to get enough internes to do the work properly. Ward J has proved an excellent ward for neurological work and the nursing has been adequate.

A new treatment for traumatic meningitis was instituted by Doctors Frank Fremont-Smith and Tracy J. Putnam — that of constant drainage of the spinal canal. This has undoubtedly saved the life of one man with a skull fracture and opened the way to new advances in this field.

One of the important elements in keeping up the interest and morale of our Staff has been the weekly conferences held every Tuesday morning. Here the difficult cases of the week have been examined and discussed by the Staff, much to the benefit of the patients and the doctors.

Two years ago three rooms on Ward L were assigned to the Neurological Service. It was expected that all the neurological female patients would be cared for here. Ward L, however, has been too disturbed, too noisy, and too much filled with patients of a low stratum of society to allow us to keep any but the worst of our female patients here. So it has been impossible to keep up the treatment of our female neurological patients as well as desired.

This year a new method has been tried in the Out-Patient Department. Dr. Miner H. A. Evans has been put in charge of the clinic Monday, Wednesday, and Friday. He has under him four volunteer workers with annual appointments, also various members of the Neurological Staff go out there on special days to do special work: Doctor Cobb one day for follow-up work, Doctor Lennox one day for epilepsy, Doctor Putnam one day for multiple sclerosis.

A new departure is being made by Dr. Maxwell E. MacDonald in organizing the treatment of neurosyphilis. This is done in the Out-Patient Department and Doctor MacDonald tries to make a neurological examination on all cases of syphilis. It is believed that if this is organized there will be great benefit to the neurological patients and to the Medical, Ophthalmic and Skin Out-Patient Departments.

Through a special grant we have been able to hold Doctor Putnam on a research into the cause of multiple sclerosis. He holds one Out-Patient clinic a week, keeps patients on Ward J, and has organized an especial laboratory for the observation of the changes in the optic nerves in these cases of multiple sclerosis.

Doctor Lennox has continued with his work on epilepsy, working one day in the Out-Patient Department. His special work is in the Thorndike Laboratory where he is studying the metabolism of epilepsy. On the wards he sees a great many epileptics in consultation, as well as those that are on the Neurological Ward.

During the year he published in collaboration with Doctor Cobb a monograph on epilepsy.

Doctor Myerson has been carrying on some interesting research at the Boston State Hospital in regard to the metabolism of the brain as determined by jugular puncture. In part of this work he has collaborated with Doctor Lennox and it appears that this collaboration may lead to important results.

Dr. Frank Fremont-Smith has organized a spinal fluid laboratory in the Thorndike Building. Here he gives expert reports to anybody in the whole Hospital who desires to bring him spinal fluids with adequate data. This has been a distinct service to the entire Hospital, but especially to the Neurological Department. Doctor Smith is also carrying on research work as to the nature of the fluid changes in the body and their relationships with edema, nephritis, fever, and the like. This work promises to be an important contribution to the borderland between neurology and medicine.

AURAL AND LARYNGOLOGICAL DEPARTMENT.

During the past year 2,781 ward patients and 5,374 out-patients were treated in the Ear and Throat Diseases Department. These out-patients made a total of 15,727 visits to the hospital for advice and treatment.

OPHTHALMIC DEPARTMENT.

During the year 1928 there were admitted to the House 163 patients. There were performed by the Ophthalmic Service, 105 operations. In the Out-Patient Department, 2,474 new patients were seen, and the total number of visits of patients in the Ophthalmic Out-Patient Department was 11,729. Of these cases, 3,146 were for refraction. This last item is very important because it indicates the great volume of refractive work being done in our Ophthalmic Department.

DERMATOLOGICAL DEPARTMENT.

There were admitted during the year for treatment in the Dermatological Out-Patient Department 3,281 new

patients. This is an increase over the preceding year of 220 cases. Of this number 316 were new luetic patients. The number of ward patients treated has been 140.

Few students and doctors appreciate how much dermatology calls for a general medical knowledge and how little guess work there is in it, and how chronic diseases yield to treatment just as much as chronic internal conditions do. It calls for a larger knowledge of therapeutics than internal medicine.

The department endeavors to keep abreast of progress in medicine. But before it commits itself to the acceptance of new procedures or apparatus, it is careful to examine into the merits of the innovations before making requisitions for them. Because the department wants to be not only conservative but intelligent as well, several standing committees, made up from the membership of the Staff have been created to report to the department on the pros and cons of all new ideas.

The House Service is not as flourishing as it should be. This is entirely due to the fact that, on account of our beds being scattered in several wards, it is not feasible, perhaps not possible, to secure efficient dermatological nursing and maintain accurate observations on treatment. The department, however, is encouraged because it has been assured that the ward difficulties will be remedied in the new buildings that are about to be erected.

The entire service is tremendously interested in the changing code of ethics and the commercialization and professionalization of welfare work. If I should become infected with that honorable and ancient pathological complex *cacoethes scribendi* I would certainly write a book entitled, "The Confessions of a Penitent, Puzzled, and Pauperized Physician." But perhaps at the start I might be deterred by recalling that an inmate of an insane asylum once observed that, "The thing that is wrong with the world, is that there is entirely too much talking."

HOSPITAL MUSEUM.

The Museum is in a condition of extremis: — Jumbled together, amusing to look at, horrible to think about and needs the philosophy of an obsessed antiquarian to find a hopeful future. However, much of interest can be salvaged from this heap.

A bright light that has generated renewed courage is a recent communication from the superintendent to the effect that he will confer in regard to suitable quarters for the museum in the new Administration Building.

We are looking forward to this time because we know that it will then be possible to make the beginning of what should in years to come be a most interesting and necessary part of an institution of the magnitude of the Boston City Hospital.

PATHOLOGICAL DEPARTMENT.

There has been considerable increase in the amount of instruction given by members of the Laboratory Staff during the past year. Doctor Mallory, as Professor of Pathology at Harvard Medical School, is giving twenty-four lectures to the second-year class. He is assisted by Dr. H. E. MacMahon who holds the position of Instructor in Pathology. Doctor MacMahon also demonstrates autopsies at the Hospital to the second-year students. Doctor Parker, who was appointed Assistant Professor of Pathology this year, holds weekly meetings with the students of the fifth service and also takes part in bi-weekly clinical conferences with the Staff and students of the Fourth Medical Service. Doctor Gay, as Instructor in Pathology at Tufts Medical School, gives a course at the laboratory in surgical pathology. Doctor MacKeen, also Instructor in Pathology at Tufts Medical School, holds classroom exercises for second year students. All members of the Staff take part in the instruction of graduate students. While such teaching takes a certain amount of time, it is felt that such time and the extra effort involved is more than well expended.

The monthly conference with the medical services have been kept up and have continued to grow in value.

During the past year, the Trustees decided that the pathological work at the Sanatorium Division should be done by one of the men at this laboratory. As a result, Doctor MacKeen was appointed Visiting Pathologist to the Sanatorium Division. He performs autopsies and does other pathological work at the Sanatorium Division but still retains his connection with this laboratory.

There have been eleven graduate students in the laboratory the past year. One, Dr. Philip Sahyoun, from Syria, is a student of the Rockefeller Foundation. The two Rockefeller students who came to us in 1927 have left.

Increase in the size of the Hospital is clearly reflected in the increase in the amount of work done by the laboratory. The number of autopsies was 433, 68 more than in the preceding year and 111 more than in 1926. Never in the history of the laboratory has this figure been approached, the highest previous figure being 397 in the year 1897. In only four years in the past, 1897, 1922, 1926 and 1927, has the number reached even 300. The bacteriological work has shown a corresponding growth. It is obvious that in order that the laboratory may keep pace with the Hospital some expansion is necessary. This should take place in two ways — personnel and building. We should like another resident and another technician. As regards the building we can only renew our plea for modern quarters of sufficient size to allow the laboratory to continue to try to live up to its ideals as to how its work should be done.

Work of the Pathological Laboratory During the Year 1928.

Autopsies	433
Surgical diagnoses	3,140
Clinical bacteriology, positive	1,098
Clinical bacteriology, negative	1,302
Blood cultures, positive	380

Blood cultures, negative	498
Guinea-pig inoculations	152
Sputa typed	136
Diphtheria, virulence determination	101
Bacillus diphtheriæ, total	2,344
Bacillus diphtheriæ, positive	3,619
Wassermanns	2,890
Number of positives	1,337
Kahn tests	10,307
Positive Kahn	1,703

THE THORNDIKE MEMORIAL LABORATORY.

The care of the sick is the fundamental function of any hospital. Clinical investigation and the diffusion of knowledge are equally important functions of any hospital that is to take part in the betterment of treatment. Such is the nature of the work of the Staff of the Thorndike Memorial Laboratory and its wards, whose members are particularly trained in research ways, so that they may aid mankind by critical and often complicated studies.

In August Dr. Herman Blumgart resigned from the Staff to accept an important position at the Beth Israel Hospital. It is a pleasure to recognize Doctor Blumgart's advance and the honor conferred on him, but his promotion has left a wide gap in the Staff. Doctor Ernstene as resident, and Doctor Gargill as assistant resident completed their services in August and are now on Doctor Blumgart's staff.

Doctor Blumgart published during the year eight papers and he has in press or the process of preparation eight other papers based upon the work accomplished at the Thorndike Memorial Laboratory. The titles of his published papers appear in the list of publications as do those of the other members of the Staff.

During the year Doctor Blumgart continued with Doctor Weiss studies on the circulation, which particularly concern the velocity of the blood flow. With Doctor Bromer he has studied the maintenance dose of digitalis; with Doctor Wolff the velocity of the intra-

cranial blood flow; with Doctor Gargill the circulatory response to disorders of the thyroid gland, and also to anemia; with Doctor Ernstene the relationship of orthopnea and venous pressure, and with Dr. C. P. Rhoades he has reported on osteoblastoma. Furthermore Doctor Blumgart has contributed with Drs. John R. Campbell and Gargill and Mrs. Gilligan important information on the treatment of diabetes insipidus and with Doctor Gargill he has studied three cases of sinoauricular block, the only three cases known in which the diagnosis has been made early enough to permit pharmacological studies. Besides these accomplishments, he has made with Doctor Gargill and Mrs. Gilligan a monumental investigation of osteomalacia. The study has resulted in restoring to health a patient desperately ill with this disease. No similar patient has ever received, at least in this community, such dramatic benefit. The improvement undoubtedly was dependent upon the therapy instituted which was made feasible by extensive and intricate laboratory and clinical investigations.

Doctor Ernstene studied with Doctors Wearn and Bromer the capillaries of the lung, besides undertaking the work mentioned with Doctor Blumgart. He furthermore studied various aspects of the sedimentation rate of the red blood corpuscles, especially in acute rheumatic fever. These studies will be published at a later date.

Beginning in the summer of 1928 four men were added to the regular Staff by virtue of gifts for salaries from private sources. The individuals mentioned below have served during all or a part of 1928.

Doctor Minot began a part of his duties on February 20, and took full charge on April 1. Doctor Wearn's promotion to associate director is noteworthy and indicates that the progress of accomplishment by this institution has necessitated two senior men rather than one.

A brief report upon the problems studied or in the process of investigation is given herewith.

A very brilliant and undoubtedly epoch making contribution to the comprehension of disease has been completed by Doctor Castle. His studies are of the highest order and indicate a new mechanism for the origin of disorders associated with altered gastro-intestinal function or a deficiency of certain food elements. He has clearly shown that the patient with pernicious anemia cannot form from a normal diet an element essential to the maintenance of health. This material can be formed within the normal stomach and even outside of the body by the action of normal gastric juice. His observations which are being continued open the way to the elucidation of numerous important problems directly related to the successful treatment of patients. Doctor Castle has been and is being assisted in his work by Doctor Townsend, who is also making studies concerning the blood formation in scurvy. Doctor Castle's work also includes studies in conjunction with members of the Neurological Department, especially Doctors Gildea and Cobb, concerning the mechanism and nature of the neurological disturbances associated with altered digestive function in certain disorders dependent upon deficient diets.

A continuation of observations on the pathology of the bone marrow, initiated by Doctor Peabody, is being undertaken by Doctor Castle. Doctor Mettier is associated with this work and is devoting considerable time to it.

The discovery in 1926 by Doctors Minot and Murphy that proper treatment with liver feeding produces rapidly and with regularity extraordinary improvement of patients with pernicious anemia, has given stimulus to numerous problems concerning patients with many sorts of anemia and disorders of the blood, some of which are referred to above and others are noted below.

A most practical piece of work is in the process of completion by Doctor Castle and Mr. Bowie, Tutorial Student. They have succeeded in making it possible for the patient in his own kitchen to obtain from liver

a palatable and economical extract of high potency. This affords by about thirty minutes of work a relief from the necessity of eating very large amounts of liver or the purchase of expensive chemically prepared liver extract.

Doctor Minot and Doctor Castle with Doctors Heath, Mettier and Townsend are making further observations on the treatment of pernicious anemia with preparations of liver. These studies include the attempt to learn the nature of the effective substance in cooperation with Dr. Edwin J. Cohn of the Harvard Medical School. Doctor Cohn is obtaining the substance from liver in progressively narrower chemical fractions, so that now an effective dose is but a few tenths of a gram per day. These investigators are securing positive information of value concerning the use of foods, liver extracts and iron in the treatment of various sorts of anemia. Doctor Mettier is studying the pathology of the liver in pernicious anemia and making observations concerning iron metabolism.

Doctor Heath, with Miss Daland and Doctor Minot, is studying the influence of various substances on immature red blood cells, as well as certain biological properties of these cells in health and disease. Observations concerning the possible influence of certain food substances in leukemia are also being made by Doctors Heath and Minot.

Doctor Muller is making observations concerning the influence of liver extracts on the growth of embryonic blood cells and chick embryos. She has also completed some studies and is making others on the influence of various foods in experimental anemia that should help to unravel clinical problems at hand.

It has been demonstrated by Doctor Muller, from a study of the blood of twenty-five patients, that changes in the amounts of certain lipoid substances in the blood are intimately associated with the onset of the remission in pernicious anemia.

Miss Daland is making a comparison of the cell con-

tent of venous and capillary blood, and determining the normal fluctuations in red cells besides undertaking the work referred to above. She is also making observations concerning the life processes of different sorts of white blood cells. This work is being correlated with some of Doctor Glover's. Doctor Glover's studies of the chemical metabolism of blood cells indicate that cells of different sorts and ages behave in distinctive ways; information of service in attempting to understand the nature of the changes in cancer.

Doctor Jackson during the past year has developed and undertaken a large amount of work bearing on the problem of cancer. His published review of the subject and the one by Doctor Glover are excellent. Doctor Jackson has completed some studies on the relation of vitamins to cancer; work that has been excellently controlled and required much patience and time. With Doctors Glover and S. S. Ellis he is studying particularly the malignant disorders of the lymphoid tissue. The chemical changes of diseased lymph nodes are being investigated from many points of view, including their treatment. In this work Doctor Parker of the Pathological Department is taking an active part. Doctors Glover and Ellis with Doctor Parker are studying the action of certain preparations of sera on normal and diseased lymphoid tissue.

Doctors Young and Taylor have also begun an attack on the cancer problem along chemical lines, but their first four months here have been chiefly devoted to mastering technic. They have within this time developed a most useful simplified method for the determination of mercury in excreta and tissues. Doctor Taylor is also making progress in improving a method for the determination of potassium in blood.

Doctor Nye, with Dr. David Seegal, a former student, has completed studies on patients concerning the importance of bacteria, known as non-hemolytic streptococci, in acute rheumatic fever. With Doctor Parker these investigators have obtained useful information

concerning experimental monocytosis, caused by repeated injection into rabbits of various dead bacteria. Some rather extensive new experiments relative to factors that govern non-specific resistance to infectious agents have been commenced by Doctor Nye. This is a most timely and important topic.

Doctor Weiss has begun a fundamental and extensive study upon hypertension and arteriosclerosis from the pathologic-physiological point of view. The study should lead to useful knowledge for the prevention and wise treatment of these exceedingly prevalent disorders of modern life. His completed work on cardiovascular disorders is large in amount and splendidly done. Besides his studies with Doctor Blumgart on the velocity of blood flow he has made two reports on this subject by himself. Furthermore, with Doctor Robb, temporarily an assistant resident, Doctor Weiss has developed a simple method of determining the blood flow by noting the effect of histamine on the minute blood vessels and completed extensive observations on the effect of histamine in man. A valuable experimental study in cats concerning the influences of a combination of substances on blood pressure has been completed by Doctor Weiss. This work is of sufficient importance to have had a leading British physiologist request the opportunity to review the work before publication.

Doctor Weiss has demonstrated and published with Dr. David Davis a useful method for the alleviation of visceral pain and studied the path of the afferent visceral impulses in the spinal cord. He has made observations on the diagnostic value of the way air is expired from the lungs with Dr. Max Hochrein, a graduate student.

Dr. L. B. Ellis is studying with Doctor Weiss the dynamics of the circulation in arterial hypertension and arteriosclerosis. They are pursuing several concrete related problems, including studies on the cardiac output. Already these investigators have demonstrated

an important fact — namely, that although the capillary blood pressure is normal in patients with arteriosclerosis and essential hypertension, the arteriolar blood pressure is normal in arteriosclerosis, but unusually high in hypertension. The body thus compensates with a rise in arterial blood pressure in order to maintain a normal capillary blood flow.

With Dr. G. Kenneth Mallory of the Pathological Department, Doctor Weiss is making observations concerning the morphologic changes in the small and large blood vessels in vascular disorders and these physicians are also completing a research on ulcerative lesions of the cardia of the stomach.

Doctor Bromer is studying with Doctor Weiss the pathologic physiology of cardiac asthma. He has completed the study on digitalis with Doctor Blumgart referred to above, and, as noted below, has been and is studying in association with Doctor Wearn the blood vessels of the heart and lungs.

Doctor Wearn has continued the studies reported upon last year and begun two years ago. His study of the circulation of the heart concerns the blood vessels of the muscle and the valves. The object is to determine the part the blood supply to the muscle plays in heart failure and thereby make possible more intelligent treatment. Doctor Bromer and Miss Zschiesche, under Doctor Wearn, are investigating the relationship of the blood vessels to the valves in endocarditis. Definite progress is being made with this work.

Doctor Mettier has shown by a new method the connections of the Thebesian vessels with the heart curtains and studies are to be carried out by Doctor Wearn and Doctor Mettier to determine the part these vessels play in the circulation of the heart in health and disease.

Doctor Wearn is continuing the studies on the lung capillaries in experimental animals. The normal behavior of the lung vessels is the problem at present with a view to using this information in the study of diseases of the lungs. Observations on the action of

various substances are being undertaken. Efforts are being made to secure cinematographic records. Doctor Bromer is associated with Doctor Wearn in this work on the circulation of the lungs.

Dr. John S. Lawrence, formerly of the Department of Medicine, Vanderbilt University, became a member of the Thorndike Laboratory Staff in October and takes Doctor Blumgart's place. He is investigating disorders of liver function. An important part of these studies concern the relationship between the monocytes (a type of blood cell) in the peripheral blood and liver disease. Various other sorts of studies especially pertaining to the gastro intestinal tract will be commenced by Doctor Lawrence during the ensuing year.

The electrocardiographic work for the whole hospital is done by the laboratory pending the time when arrangements may be made for a "central heart station" for the Hospital. Doctor Faulkner has been placed in charge of this work with Miss Hayes as technician. Doctor Faulkner is also conducting investigations concerning the heart and has studied especially some unusual aspects of sinus-arrhythmia.

Doctor Davidson is making worthwhile observations concerning the absorption of materials from the large bowel.

For four months Doctor Hathaway worked as a volunteer in the laboratory on the reaction of animals' bone marrow to nuclein.

During the year about 170 patients have been treated in the Thorndike Ward. Seventy of these individuals suffered from disorders of the blood forming organs of nutrition, 24 of epilepsy, 25 of cardio-vascular disease and the remainder from a wide variety of other conditions.

Investigation does not mean that the laboratory supplies something absolute which does away with the necessity for careful study at the bedside. Experience shows that where the greatest progress is being made in theoretical medicine or fundamental science there also

are clinical discoveries most easily made by critical observations on patients. Progress is advanced in this world by the slow accumulation of many facts. Who could have foreseen that when Newton, Kepler and Descartes added to our knowledge of the mechanism of vision that they among other scientists paved the way for many discoveries, such as those of Pasteur and Koch.

Success will follow in proportion to the intensity of study by wisely selected persons enabled to work calmly and deliberately. Money alone accomplishes nothing, but it is the medium by which the proper men can be made free to devote themselves wholeheartedly to the care of the sick, to the search for knowledge to aid mankind, and thus proceed toward the defeat of such diseases as cancer and all forms of ill health. It is hoped that with such view points and spirit the work of the Thorndike Memorial Laboratory and its ward will progress in the future, as it has in the past under the splendid organization and direction of the late Doctor Peabody.

X-RAY DEPARTMENT.

The work of the past year has shown a consistent increase in amount over the preceding year. We shall probably require another Visiting Physician before the coming year is up, if the work continues to increase at its present rate. The Diagnostic Clinic is now running to about 80 per cent of its capacity. The treatment division is not being used to its proper capacity by the Hospital Staff. During the coming year we expect to install a new deep therapy machine capable of treating two patients at one time. The results in the treatment division have been satisfactory, especially in the treatment of superficial skin infections.

During the coming year the hospital proposes to establish a Tumor Clinic which is very much needed for classifying and properly disposing of the various cases of new growth.

The clinic material is constantly being used advantage-

ously for both teaching and research work. Several interesting papers were published by the Staff during the past year.

It may be necessary to add a photographer to the technical staff, because this work is now taking a great deal of the time of one of the technicians.

There are two unsatisfactory factors which are yet to be remedied by the other members of the Staff. The first has to do with the loss of films from the Department. This is due to careless handling of films taken from the Department for the purpose of bedside study. The second is the large number of requests for X-Ray examinations which are apparently unnecessary. Remedies for curing these unsatisfactory conditions have been recommended on several occasions to the Staff but are not being followed out.

The Out-Patient Clinics are so large that quick service in X-Ray examinations are being called for with increasing frequency. Hence, it may be necessary in the near future to install in the Out-Patient Department a small unit to furnish this service.

Following is the statistical report of the X-Ray Department for the year 1928:

Number of ward patients	14,312
Number of out-patients	13,781
Number of visits of out-patients	16,908
Number of out-patients not included in another department	<u>3,127</u>

Visits of Ward Patients.

Routine cases	13,293
Gastro-intestinal examinations	827
X-Ray treatments	155
Radium treatments	37
	<u>14,312</u>

Visits of Out-Patients.

Routine cases. Patients from this hospital,	13,087
Routine cases. Patients from outside physicians	<u>2,430</u>
Carried forward	15,517

<i>Brought forward</i>	15,517
Gastro-intestinal examinations. Patients from this hospital	531
Gastro-intestinal examinations. Patients from outside physicians	620
X-Ray treatments. Patients from this hospital	157
X-Ray treatments. Patients from outside physicians	71
Radium treatments. Patients from this hospital	6
Radium treatments. Patients from outside physicians	6
Total visits of out-patients	<u>16,908</u>

Number of X-Ray and Radium Treatments.

House patients	416
Out-patients	1,152
Outside doctors' patients	496
Total number of treatments	<u>2,064</u>

Consultations and Examinations.

House patients	217
Out-patients	717
Outside doctors' patients	48
	<u>982</u>

At the Haymarket Square Relief Station, 1,188 patients were treated or examined and 2,554 films were made.

At the East Boston Relief Station, 480 patients were treated or examined and 601 films were made.

The number of dental films made during the year was 7,774, so making the total number of films for the year 66,437.

DEPARTMENT OF PHYSICAL THERAPEUTICS.

During the past year the Department of Physical Therapeutics suffered a great loss in the death of its Physician-in-Chief Dr. Frank B. Granger, and it takes this occasion to express its sorrow.

As in the preceding year the department carried on its activities in two sections, A and B. Section A remained in the Out-Patient Building, while Section B was moved during the last month of the year from the Entrance Lodge to the new Surgical Building. In its present location this Section is equipped with new and modern electro-therapeutic apparatus.

The hydrotherapy subdivision of this section, for lack of space, did not function in the Entrance Building. It has been established in the new quarters. An entirely new division, the Muscle Training Room, was added to the Department. This room is equipped with modern apparatus employed for the restoration of function. There is reason to believe that the medical gymnastics carried on in this branch will shorten the period of disability of patients.

The figures that follow will give an idea of the scope of work in the department. Hereafter, the aim will be towards qualitative rather than quantitative progress. The statistics for 1928 are as follows:

Number of visits of ward patients	6,909
Number of ward patients treated	889
Number of out-patients treated	4,030
Number of out-patients counted elsewhere besides this department	4,030
Number of visits of out-patients	50,972
Total treatments given	166,976

DEPARTMENT OF IMMUNOLOGY.

The statistical report of the Department of Immunology for the year 1928 is as follows:

Total number of patients.

In Out-Patient Department	1,307	
In House	52	
	—	1,359
Total number of visits to out-patient clinics . .		10,265
Total number of visits of doctors to House patients .		139
Curative and diagnostic inoculation:		
Number of patients (including House patients) .		454

Curative and diagnostic inoculation:

Number of visits (including visits of doctors to House patients)	5,433
Number of curative and diagnostic inoculations .	11,067

Protective inoculation:

Number of individuals (chiefly doctors and nurses) receiving protective inoculation against typhoid and paratyphoid	102
Number of protective typhoid and paratyphoid inoculations	397
Number of visits	397
Number of individuals (chiefly nurses and social service workers) receiving protection against diphtheria	60
Number of toxin-antitoxin injections	192
Number of individuals receiving the Schick test .	102
Number of Schick tests done	102
Number of visits	341
Number of individuals (chiefly nurses and social service workers) receiving protection against scarlet fever	4
Number of Dick toxin injections	4
Number of individuals receiving the Dick test .	51
Number of Dick tests	51
Number of visits	105
Number of individuals receiving protection against hay fever	121
Number of cutaneous tests, or protective and therapeutic inoculations in treatment of hay fever,	1,814
Number of visits	904
Number of individuals receiving protection against smallpox	9
Number of visits	18
Number of dog bite (or other animal) cases . .	594
Number of individuals receiving protective injec- tions against rabies	124
Number of protective antirabic injections . .	1,696
Number of visits	2,251

Chemo-serum Therapy:

Number of patients under treatment for neuro- syphilis	57
Number of visits of neurosyphilis patients . .	927

Chemo-serum Therapy:

Number of intravenous arsphenamine injections	403
Number of intradural arsphenaminized serum injections	215
Number of lumbar punctures done for diagnosis	19
Number of intramuscular bismuth injections	239

The work of the laboratory:

Number of autogenous vaccines prepared	950
Number of Swift-Ellis and Ogilvie sera prepared	218
Number of colloidal gold tests done:	
For House service	249
For this service	221

470

Number of spinal fluid cell counts done	69
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From 70 specimens of blood taken from convalescent patients the following doses of sera were prepared and bottled for the South Department:

Convalescent measles sera	477
Convalescent scarlet fever sera	12
	<hr/>
	<u>489</u>

These sera were used in treatment of, or protection against, the above-mentioned diseases at the South Department.

PEDIATRIC DEPARTMENT.

During the year 1928, the Pediatric Department treated 921 ward patients, and 2,516 out-patients. These out-patient figures include 20 baby hygiene patients. Eight hundred twenty-four of these out-patients were also counted in another out-patient department. The out-patients made a total of 7,460 visits to the department for advice and treatment.

CLINICAL LABORATORY.

The work of the department has always been definitely divided into two divisions: Clinical and Laboratory.

Heretofore this department exercised general supervision over practically all of the cases of surgical diabetes in the House. However, owing to the increased interest

on the part of the Surgical House Staff in the problem of surgical diabetes, general supervision on the part of the clinical laboratory has not been necessary. Our practice at present is to see such surgical cases only in consultation. This is equally true in the case of patients suffering from nephritis. On the other hand, the department still has general supervision of practically all of the basal metabolism studies, and still has charge of the Diabetic, Nephritic and Thyroid Out-Patient Clinic which meets in the Out-Patient Department twice a week.

The department has full charge of all the routine laboratory work in the various surgical services. Furthermore, the department continues to do special laboratory work for all the services with the exception of the fourth medical service. During the past year 2,627 special blood tests have been done on patients in the House; 867 special blood tests in the Out-Patient Department; 320 basal metabolism determinations on patients in the House and 903 basal metabolism determination on patients in the Out-Patient Department.

The following figures represent the work of this department for the year 1928:

Number of out-patients treated	321
Number of these out-patients counted elsewhere beside in this department	321
Number of visits of out-patients	4,710

DEPARTMENT OF ORAL SURGERY.

Following is a report of work done in the Oral Surgery Department for the year 1928:

Number of ward patients treated	634
Number of scarlet fever patients treated	17
Number of out-patients treated	1,672
Number of these out-patients treated elsewhere	1,203
Number of visits of out-patients	2,169
Number of teeth extracted	2,792
Impacted teeth removed	39
Supernumerary teeth removed	4

Local anesthesia	2,671
Nitrous-oxide anesthesia	58
Ether-anesthesia	35
Ethyl-chloride anesthesia (local)	64
Alveolar abscesses opened on face	55
Alveolar abscesses	203
Treatments	643
Consultations	557
Osteomyelitis	67
Vincent's infection	25
Necrosis of jaws	16
Fractured jaw	57
Pathological fractured jaw	1
Bone cysts	8
Dentigerous cysts	2
Sequestra	12
Carcinoma	2
Parotitis	1
Removal of foreign bodies	2
Prophylaxes	783
Prophylaxes by Forsyth students	175

GASTRO-INTESTINAL SERVICE.

The work in this clinic is developing satisfactorily. We have five or six regular workers; one visiting physician, one or two junior visiting physicians and three regularly appointed assistants in medicine. This is an experienced group; all but one worked in the clinic last year. With this large force it is possible to give every case careful and detailed study and supervision. The clinic grows steadily, this year there were 772 out-patient visits compared with 525 a year ago. The clinic has more than doubled in size in the last four years.

We have long planned to hold the clinic more frequently, and this December two sessions a week were begun. This should make it easier to refer patients from other clinics and to get the initial examination with its laboratory work finished more promptly and also provide care for more patients a year without

increasing the number of workers. At first this extra day has been used largely as a laboratory day for examination of stomach contents and feces, liver function tests, occasional biliary drainage, etc.

The value of a continued service is seen here as in other departments of the hospital, enabling the same physicians to follow the same patients over a long period of time. The cases seen in consultation in the wards have been of a high order of interest and importance and excellent for study and teaching. We are very grateful to our colleagues for this opportunity.

The out-patient clinic would welcome more digestive cases from all the services after discharge from the wards. There is plenty of room for extension of this work. We never get enough follow-up material in important chronic cases, such as jaundice, gall bladders, peptic ulcer, colitis, etc., in spite of our best efforts. Most of these cases need further help and study after the few days or weeks spent in the hospital. It is just as important in digestive cases as in diabetes, anemias or diseases of the heart or kidney. It is also one of the most interesting parts of medicine to know whether diagnosis has proved accurate and how treatment is succeeding and to get data about "end results."

The use of the appointment system for our patients, begun this year, has been very satisfactory. It has kept the work of the clinic even from day to day, resulting in better service for the patients and easier and better work for the doctors. It makes a good impression on the patients and they take it seriously. Most appointments are kept and patients often telephone if it is impossible for them to come. It has helped much to make the ambulatory treatment of our duodenal ulcers more systematic and satisfactory.

We have continued to examine the X-ray plates of all our cases and to correlate the clinical with the X-ray data. This has improved diagnosis and has tended to rule out occasional errors which creep in with the use of either method alone.

The following clinical research has been carried out during the year:

Doctors White and Jankelson have made a clinical study and report of two cases of late intussusception of the bowel into the stomach after gastro-enterostomy. This is a condition of great rarity and interest; only fifteen previous cases were found in the literature and only one previous similar case has been reported in this country. It presents the unhappy combination in which early diagnosis is the only way to save the patient's life, and in which the diagnosis in the past has usually been wrong.

Doctors White and Jankelson have made a clinical study and report of two cases of chronic jejunal obstruction due to tuberculosis of the jejunum.

Doctor Davidson has studied the effect of a non-specific protein (Aolan) in the treatment of gastric and duodenal ulcer.

Doctor Davidson has studied the effect of four to eight ounces of lactose (given in a specially prepared ginger ale) in changing the intestinal flora in a series of cases.

Doctor Jankelson is studying and will report a series of cases of acute intestinal obstruction caused by stone in the ureter.

Occasional other rare or interesting cases have been grouped for future report such as diaphragmatic hernia of the stomach, diverticula of the duodenum, proved cases of chronic hepatitis, gastric crises, cancer of the pancreas, etc.

The following figures represent the work of the Clinic for the year.

Number of ward patients treated or seen in consultation	145
Number of out-patients treated	139
Number of visits of out-patients	772

All ward patients and out-patients are counted elsewhere beside this Department.

BLOOD LABORATORY.

The work of the Blood Laboratory during the year 1928 is represented by the following figures:

House cases:

Complete blood examinaions	274	
Partial blood examinations	74	
	<hr/>	348

Out-patient cases:

Complete blood examinations	178	
Partial blood examinations	75	
	<hr/>	253

Total blood examinations	601
Consultations	89
Blood specimens for Wassermann	90
Transfusion groupings	584
Number of out-patients treated	123
Number of out-patients counted elsewhere and also in this Department	42
Number of visits of out-patients	452

In addition to this work some technical teaching has been done and assistance has been rendered to members of the Staff in preparing cases for presentation before students and at various meetings at the Hospital. The laboratory has continued to maintain a large list of professional donors for the convenience of the Staff and for use both in the Hospital and outside of it. The number thus supplied cannot be stated, as the list is kept open for the use of house officers, and donors are frequently called for but not used.

The usual work of the laboratory in the preparation of sera for transfusion-grouping, stains and other materials has continued.

SERVICE FOR TROPICAL DISEASES.

During the past year the Service has employed Dr. Wilmot C. Townsend as resident, his salary being paid by the Department of Tropical Medicine of Harvard Medical School. He was appointed jointly by this Service and by the Thorndike Memorial Laboratory so

that he has had the privilege of working in that Laboratory. The arrangement has the further advantage that Doctor Townsend has been enabled to assist in the work of Dr. W. B. Castle and to profit by a certain amount of general oversight by Dr. George R. Minot. Thus Doctor Townsend has been fully occupied with important research even when clinical material was not available for work of special interest to the Tropical Service.

Doctor Townsend's duties have been as follows: To oversee the care of cases of tropical disease on the Fourth Medical Service working through the House Staff of that Service. To perform upon request special examinations for the detection of tropical diseases in cases under the care of other services. To study certain aspects of sprue, pellagra and scurvy. To assist Doctor Castle in his studies of anemia. To assist Doctor Shattuck at the Hospital when needed.

I believe that, when his work is published, it will be creditable to the Hospital and to all concerned.

CARDIAC CLINIC.

During the last year, the Cardiac Clinic has made a substantial gain as to number of patients examined. The number of patients being seen each Monday at the present time is ideal, the average weekly number being fifteen. The clinics utilizing this clinic most are the medical and prenatal, the cases being referred either for an opinion or for follow up. There have been many consultations in which all interested physicians and social workers were present. A great amount of interest has been displayed in the cases of broken compensation which have been discharged from the wards "relieved," and referred to the Heart Clinic for follow up work. By keeping this group under definite periodic observation and outlining their mode of living and type of work, advising rest and medication at the onset of the slightest signs of failure, they have been given every chance commensurable with the condition of their heart

muscles to stay compensated. The intensive study and care of this group has undoubtedly been of economic gain to the Hospital.

One hundred fifty-seven new out-patients have been treated during the year. They have made 790 visits to the Clinic.

DEPARTMENT OF SOCIAL WORK.

The private committee continued to supplement the work of the hospital in helping to provide social care and follow-up for groups of patients in connection with the main hospital and the South and Out-Patient Departments.

The committee also continued to provide means to carry on the library and recreational work for ward children and adolescents admitted to the main hospital and the contagious department, paying the salaries of two workers and providing supplies.

STATISTICS.

During 1928 the monthly average of our paid staff was $23\frac{2}{3}$. This included an average of $14\frac{1}{2}$ social case workers dealing directly with the patients; two recreational workers; three full-time and one part-time clerical workers; and three executives.

Besides follow-up service given to many hundreds of patients on whom no social records were made, our case workers gave definite social after care outside the hospital to 2,745 patients: [Two thousand three hundred forty-nine of these were new and reinstated patients]; and paid 5,621 visits outside the hospital to homes and agencies in the interests of these patients. In addition many hundreds of ward children were given definite recreational and library service by our two recreational workers and a number of volunteers.

EXPENDITURES.

As in previous years, support for the department has been received from both public and private funds.

Through the Hospital Budget.

Salaries	\$20,282 65	
Printing, stationery and postage	436 25	
Furniture and furnishings	103 11	
Telephone rentals	601 66	
Telephone, telegraph and messenger service	156 62	
Carfare for city paid workers	537 50	
		<hr/>
Total		<u>\$22,117 79</u>

In addition there was expended for surgical apparatus from the interest on the Perkins Fund		<u>\$169 55</u>
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From the Hettie Lang Shuman Memorial Library Fund for books and magazines for the Children's Library.		<u>\$131 62</u>
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Through the Private Committee.

Salaries	\$15,621 90	
Carfares, telephone, laundry and postage	229 25	
Office supplies	74 75	
Publicity	484 40	
		<hr/>
Total		<u>\$16,410 30</u>

In addition there was received for special relief of certain patients and for supplies for our recreational work with ward children as follows:

Collected by case workers	\$1,064 76	
Received from the Committee of the Permanent Charity Fund, Inc.	775 01	
Anonymous gifts for "needy patients"	* 220 00	
Children's recreational work	335 00	
		<hr/>
Total		<u>\$2,394 77</u>

* \$100 of this was received in 1927.

COMMITTEE.

Mrs. George H. Monks, Chair- man.	Mrs. J. C. Hubbard.
Mrs. Reid Hunt, Secretary.	Mrs. Charles C. Lund.
Mr. William C. Endicott, Treasurer.	Mrs. I. A. Ratshesky
Mrs. E. H. Bradford.	Mrs. William H. Robey.
Mrs. C. A. Coolidge.	Mrs. John Rock.
Mrs. Thomas Devlin.	Mrs. Milton J. Rosenau.
Mrs. Henry Ehrlich.	Mrs. Joseph T. Wearn.
	Mrs. George R. Minot.

Miss Gertrude L. Farmer, Executive Director.

HOSPITAL SCHOOL FOR CHILDREN.

The Hospital School is conducted under the supervision of the Boston Public School Committee. The total enrollment for the year was 396. The daily average number of pupils was 51, and the average number who received some instruction was 30. On June 28, 1928, there were 11 children, then patients of the Boston City Hospital for two months or longer who had completed the work required for promotion to the next higher grade. Promotion on trial was recommended for 4 children.

The following letter illustrates an accomplishment of the aim of the hospital teacher. Claire, an eighth-grade pupil, had been a patient in the Thorndike Building.

"DORCHESTER, MASS., May 19, 1928.

DEAR MRS. McHUGH,—I know you will be pleased to hear that I have passed in all my subjects. I want to thank you for the interest you took in me while in the hospital.

My home room teacher was surprised that I was able to keep up so well in my studies.

Yours sincerely,

CLAIRE."

At the request of the superintendent, a teacher was appointed by the School Committee to continue the teaching and recreational work during July and August.

SOUTH DEPARTMENT.

During the thirty-four years that the department has been in operation, 80,367 patients have been received, nearly all ill with an infectious disease.

HAYMARKET SQUARE RELIEF STATION.

This Relief Station has been in commission twenty-seven years. In these twenty-seven years, 841,716 patients have been treated. The number of patients treated during the first year was 20,150 and during the past year 27,301. These patients received 28,494 days' treatment.

EAST BOSTON RELIEF STATION.

In the twenty years that the East Boston Relief Station has been in operation, 235,352 patients have been treated. For the year ending December 31, 1928, 8,519 patients were treated. These patients received 21,690 days' treatment.

CONVALESCENT HOME.

During the thirty-eight years that the Convalescent Home has been in operation, 13,083 patients have been benefited.

The number of patients treated during the past year was 349, who received 5,322 days' treatment.

WEST DEPARTMENT.

In October, 1928, the West Department, which has been leased to the United States Government since November, 1918, for the care of war veterans, being called United States General Hospital No. 10, was returned to the Hospital Trustees. An appropriation of \$7,500 was granted for maintenance of the plant during the remainder of the year. Watchmen and engineers have been employed there since its return. It has been decided to rehabilitate this department. At present the buildings are unfurnished except for some permanent fixtures, such as certain kitchen equipment,

etc. The plant is in fair condition but will have to be painted, and hospital furniture must be procured.

SANATORIUM DIVISION.

The Sanatorium Division (formerly the Boston Sanatorium) became a part of the Boston City Hospital on April 1, 1927. Since that time 1,083 tuberculosis patients have been treated there. During the year ending December 31, 1928, 707 patients were treated. These patients received 127,165 days' care.

OBITUARY.

Thomas Alexander Forsyth, Trustee of the Hospital since December, 1914, and Secretary to the Board of Trustees since July, 1918, died suddenly in March.

The trustees at this time wish to record their sincere sorrow and sense of loss on the death of Mr. Forsyth, and to spread on the records their expression of appreciation for his long and faithful service as a member of this Board.

Dr. Charles Montraville Green, Senior Surgeon for Gynecology and Obstetrics passed away in November, so ending a long and distinguished career. The resolutions of the Senior Staff upon his death follow:

"The announcement of the death of Dr. Charles Montraville Green brings to us a feeling of profound sorrow and keen regret.

He was a member of the Hospital Staff for forty-four years and his constant and many-sided contacts with the great institution he so ably served, made this epoch one of great accomplishment. We recall with satisfaction and pride our happy and intimate relations with him during the thirty-two years he was a member of the Senior Staff and the period from 1907 to 1914 when he served as its President.

His untiring zeal and painstaking devotion to his work made him an invaluable member of the hospital he served so well."

Dr. Howard Augustus Lothrop, Consulting Surgeon, died in July, after an eminent hospital service of thirty years. The Senior Staff adopted the following resolutions upon his death:

"That in the death on June 4, 1928, of their colleague, Howard A. Lothrop, M. D., the staff of the Boston City Hospital has sustained a great loss.

That Doctor Lothrop's long term of service at the hospital, both as a surgeon and teacher, was characterized by his marked ability, his entire devotion to the welfare of his patients and his constant endeavor to promote the best interest of the hospital.

That through his constant endeavors to impart his surgical knowledge to those working under him and with him, his manual skill, his conscientious and keen pursuit of the best in surgery, and his high ideals, he attained a high position in his profession."

Dr. Frank Butler Granger, Physician-in-Chief for Physical Therapeutics, passed away in October. The appreciation and sorrow of the Senior Staff are expressed in the following paragraphs:

"Frank Butler Granger, M. D., Harvard Medical School 1902, head of the department of physiotherapy in this hospital since its inception in 1908, died at his home in Boston October 23, 1928, in his fifty-fourth year.

His death adds one more to the long list of martyrs in the profession who have fallen victims to X-ray cancer.

The close of his life was pathetically in keeping with the years of his strength. Facing the end, he devoted his failing energies to finishing his book, that others might benefit by the results of his years of experience, and it was in fact but a fortnight before the end that the book was done.

One first knew Granger as the electrotherapeutist of the Boston Dispensary — young, then — earnest and able, above all sane, and to the thinking of some of us the one man to coordinate the specialty now so familiar as "Physiotherapy." In those days, twenty years ago,

there was no physiotherapy — only electrical experts, hydrotherapists, masseuses, rubbers, and trainers.

It is much to the credit of the Boston City Hospital that it was possible to create a place there, and a department, for him.

Most of us know something of the story of these twenty years. Granger was one of the first physicians of the regular school in Boston to practice electrotherapy; the first in the country to set it in its place in the larger field of physiotherapy.

The City Hospital Department of Physiotherapy was an innovation, its chief a pioneer. The specialty is recognized today and throughout his life he was its recognized head, occupying not only positions of importance and authority but a peculiar prestige rendered perhaps as much to character as to technical sufficiency.

When the great war came he was enrolled — one of his sort would be, without question — and called of Washington. Almost overnight he became the head of the physiotherapy service under Col. Frank Billings in charge of "Reconstruction," and from then on he was the accepted government authority in his field.

Entering the army as captain, he was discharged a lieutenant-colonel in 1919, and up to his death was in authority as counsellor of the Medical Council of the Veterans' Bureau. Some of us regretted his frequent absence on government inspections, when we needed him here!

He was a past president of the American Academy of Physiotherapy and of the American Electrotherapeutic Association; Chairman of the Council of Physiotherapy of the American Medical Association; lecturer on physical therapeutics, 1906-1910, and Assistant Professor of Physical Therapy, 1927-1928, at Tufts College Medical School; Instructor for courses for graduates, Harvard Medical School, 1911-1928.

His work here at the hospital was the organization of physical therapeutics and the bringing up of his department to a place second to none in the country.

His private practice was large, successful, characterized (as all who loved him would expect) by abundant giving of himself and of his resources — to every and any one. Granger would not have been Granger if he could have been a good ledger-keeper.

After all, however, his highest professional distinction is that he long stood almost alone convinced of the truth that lay in physiotherapy, weathered the sorties of the charlatans into his chosen field; lived to see physiotherapy recognized as an important specialty in medicine. Which is to say that he was fundamentally real, intellectually honest, courageous. Also, he was a kindly, friendly man.

His last message to the profession was given in a message to the American Academy of Physiotherapy in session in New York City a few days before his death; it closed with the words — “Adopt no ‘holier than thou’ attitude!” That epitomizes his kindliness of thought — characteristic of his every act.

Not a soft man, an adroit diplomat, a fighter with the zest that only a real sense of humor lends to a good fight, yet he was essentially the friendliest of men, friendly, interested in all good people, in their affairs and interests, in all things human, and the best of good friends himself. Only those close to him in the latter days will grasp the full strength of his character.

With the knowledge that he was doomed, frightfully distressed, he could yet smile and listen with patience to those with ailments trifling compared with his own, and certainly less cheerfully borne.

The City Hospital has lost a worthy physician of conspicuous service; the profession has lost a doughty champion in his chosen field; those of us who loved him, and worked with him, an irreplaceable friend.

CHANGES IN THE MEDICAL AND SURGICAL STAFF.

Joshua C. Hubbard, M. D., Surgeon-in-Chief and Head of the Harvard Teaching Service, resigned in

September. His resignation was accepted with great regret and he was appointed to the position of Consulting Surgeon.

The following members of the Visiting Staff resigned their positions: George E. Rafferty, M. D., Assistant Visiting Ophthalmic Surgeon; Frederick W. O'Brien, M. D., Visiting Physician for Physical Therapeutics; Edmund W. Burke, M. D., Assistant Visiting Physician for Physical Therapeutics.

The following promotions were made: Irving J. Walker, M. D., Arthur R. Kimpton, M. D., from the position of Visiting Surgeons to that of Surgeons-in-Chief: Francis F. Henderson, M. D., Herbert H. Howard, M. D., and James J. Hepburn, M. D., from the position of Assistant Visiting Surgeons to that of Visiting Surgeons; William R. Morrison, M. D. and Edward Harding, M. D., from the position of Junior Visiting Surgeons to that of Assistant Visiting Surgeons; Charles C. Lund, M. D. and Joseph H. Burnett, M. D., from the position of Assistant to Visiting Surgeons to that of Junior Visiting Surgeons; Reginald D. Margeson, M. D., Pierce J. Dunphy, M. D., Abraham S. Troupin, M. D., and Carmi R. Alden, M. D., from the position of Assistants to Visiting Surgeons for Gynecology and Obstetrics to that of Junior Visiting Surgeons for Gynecology and Obstetrics; Joseph Resnik, M. D., from the position of Assistant Visiting Physician for Physical Therapeutics, to that of Visiting Physician for Physical Therapeutics and later to the position of Acting Physician-in-Chief for Physical Therapeutics.

The following appointments were made: For the Harvard Surgical Teaching Service: Irving J. Walker, M. D., Professor of Surgery and Edward D. Churchill, M. D., Associate Professor of Surgery. Other appointments were made as follows: George P. Reynolds, M. D., Junior Visiting Physician; James M. Faulkner, M. D., Junior Visiting Physician; William B. Stevens, M. D., Junior Visiting Physician; Nathan Sidel, M. D., Junior Visiting Physician; William T. O'Halloran,

M. D., Junior Visiting Physician; Frederick W. O'Brien, M. D., Visiting Physician for Physical Therapeutics; James W. Redmond, M. D., Junior Visiting Pediatrician; Chester L. Glenn, M. D., Junior Visiting Pediatrician; Newton C. Browder, M. D., Assistant to the Visiting Surgeons.

ASSISTANTS TO THE VISITING STAFF.

The following temporary appointments were made for the term of one year:

For the position of Assistant in Medicine: Beginning January 1, 1928: Hermann L. Blumgart, M. D., Albert W. Bromer, M. D., Arthur C. Ernstene, M. D., James H. Townsend, M. D., William B. Castle, M. D., Soma Weiss, M. D., Nathan Sidel, M. D., William T. O'Halloran, M. D., Hyman B. Goldberg, M. D., I. R. Jankelson, M. D., William Dameshek, M. D., Norman Welch, M. D.

Beginning February 3, 1928: Samuel Morein, M. D. (for six months).

Beginning June 8, 1928: Nathan Sidel, M. D. (for six months), William B. Stevens, M. D. (for six months), Doctor Sidel and Doctor Stevens were appointed Junior Visiting Physicians on August 3, 1928, so ending their service as Assistants in Medicine.

Beginning December 7, 1928: Lloyd D. Felton, M. D.

To the position of Assistant in Surgery: Beginning January 1, 1928: David D. Berlin, M. D., Gordon D. Atkinson, M. D. (Genito-Urinary Service), A. Bedel. Shoemaker, M. D. (Genito-Urinary Service), Allan L. Davis, M. D., Daniel C. Goldfarb, M. D., Newton C. Browder, M. D., Aaron Thurman, M. D., Philip S. Foisie, M. D.

Beginning February 1, 1928: Edward B. Ormsby, M. D., John V. McMackin, M. D. Doctor Ormsby resigned in October.

Beginning March 1, 1928: Tracy J. Putnam, M. D., G. Kenneth Coonse, M. D., Francis X. Shea, M. D.

Beginning May 1, 1928: William A. White, Jr., M. D., Llewellyn H. Rockwell, M. D., Robert J. Kirkwood, M. D., Michael E. McGarty, M. D., Arthur B. Donovan, M. D., Benedict F. Boland, M. D.,

Beginning August 1, 1928: Joseph W. Tiede, M. D., Gordon M. Morrison, M. D., Panos Dukakis, M. D., Leonard P. Landry, M. D., Winchester W. Everett, M. D.

Beginning November 1, 1928: Paul N. A. Rooney, M. D., David S. Green, M. D., Daniel J. Duggan, M. D., John E. Hopkins, M. D., Thomas P. Kendrick, M. D.

To the position of Assistant in Gynecology and Obstetrics: Beginning the first Monday in January, 1928: Edward F. Downey, M. D., Arthur H. Perkins, M. D. Doctor Downey resigned in January and Emilio D'Errico, M. D. was appointed for the year 1928.

Dr. Arthur H. Perkins resigned, his resignation taking effect October 1, 1928. G. Elliott May, M. D. was then appointed to the position for three months beginning October 1, 1928.

To the position of Assistant in Neurology: Beginning September 7, 1928: Tracy J. Putnam, M. D., Edwin F. Gildea, M. D.

Beginning October 1, 1928: Guy C. Randall, M. D., Mark H. Wentworth, M. D.

On June 8, James W. Shea, M. D. was appointed Voluntary Assistant in the Ophthalmic Department for one year. Doctor Shea served until his death in December, this being caused by influenza.

During the year other voluntary assistants were appointed for varying terms of service as follows:

Samuel S. Ellis, M. D. Fourth Medical Service, beginning August 1, 1928.

Eugene C. Glover, M. D. Fourth Medical Service, beginning August 1, 1928.

Albert G. Young, M. D. Fourth Medical Service, beginning July 1, 1928.

F. H. L. Taylor, M. D. Fourth Medical Service, beginning September 1, 1928.

Isadore Green, M. D. Neurological Out-Patient Department, beginning June 22, 1928.

Humphrey L. McCarthy, M. D. X-Ray Department, beginning March 2, 1928.

George P. Robb, M. D., ended his service as Volunteer Assistant in the Thorndike Laboratory in June, 1927.

PUBLICATIONS OF THE MEDICAL AND SURGICAL STAFF.

Following is a list of the scientific papers published by members of the Hospital Staff during the year 1928:

"Treatment of Empyema Following Pneumonia," by Horace Binney, M. D. *New England Journal of Medicine*, August 30, 1928.

"Lymphatic Leukemia of the Skin with Universal Exfoliating Erythroderma," by William P. Boardman, M. D. *Archives of Dermatology and Syphilology*, Vol. 18, pages 86-96, July, 1928.

"Studies on the Velocity of Blood Flow. IX. The Pulmonary Circulation Time, the Velocity of Venous Blood Flow to the Heart and Related Aspects of the Circulation in Patients with Cardiovascular Disease," by Herrman L. Blumgart, M. D., with Soma Weiss, M. D. *Journal of Clinical Investigation*, Vol. 343, 1928.

"Studies on the Velocity of Blood Flow. X. A Comparison of Changes in the Velocity of Blood Flow with Changes in the Venous Pressure and the Vital Capacity of the Lungs in Fifty Patients with Cardiovascular Disease and in Fifty Normal Persons," by Herrman L. Blumgart, M. D., with Soma Weiss, M. D. *Journal of Clinical Investigation*, Vol. V, 379, 1928.

"Studies on the Velocity of Blood Flow. XI. The Pulmonary Circulation Time, the Minute Volume Blood Flow through the Lungs, and the Quantity of Blood in the Lungs," by Herrman L. Blumgart, M. D., with Soma Weiss, M. D. *Journal of Clinical Investigation*, Vol. VI, No. 1, 1928.

"The Antidiuretic Effect of the Oxytonic and Pressor Principles of the Posterior Lobe of the Pituitary," by Herrman L. Blumgart, M. D., with Samuel Gargle, M. D., and Dorothy Gilligan. *New England Journal of Medicine*, March 10, 1928.

"The Treatment of Diabetes Insipidus with Posterior Lobe of the Pituitary Applied Intranasally," by Herrman L. Blumgart, M. D., with John R. Campbell, M. D. *American Journal of Medical Science*, November, 1928.

"The Osteblastomas not Connected with Bone, Histologically Identical with Osteogenic Sarcoma, and Clinically Benign," by Herrman L. Blumgart, M. D., with C. P. Rhoads, M. D. *The American Journal of Pathology*, Vol. IV, No. 4, July, 1928.

"A Dermoid of the Cornea in a Guinea Pig," by Alexander E. Brunschwig, M. D. *American Journal of Pathology*, Vol. IV, 371, 1928.

"Diaphragm Excursions, Normal and Pathologic," by P. F. Butler, M. D., with Harold W. Dana, M. D. *The American Journal of the Medical Sciences*, October, 1928.

"Diseases of the Blood and Blood Forming Organs and Diseases of the Kidney," by William B. Castle, M. D., in collaboration with George R. Minot, M. D. Section in *Practical Medicine Series*, Year Book Publishers, Chicago, Ill.

"The Use of Salicylates in the Treatment of Chronic Epidemic Encephalitis," by Stanley Cobb, M. D., R. K. Farnham, M. D., and S. H. Epstein, M. D. *Boston Medical and Surgical Journal*, Vol. 197, No. 33, 552-1556, 1928.

"Epilepsy from the Standpoint of Physiology and Treatment" (book), by Stanley Cobb, M. D., and William G. Lennox, M. D. *Medicine*, VII, No. 2, 105-290, May, 1928.

"Studies in Cerebral Circulation," II. "A Quantitative Study of Cerebral Capillaries," by Stanley Cobb, M. D., and J. H. Talbott: reference: *Association of American Physicians*, Vol. 42: 255.

"Physiology, Psychiatry and the Inhibitions," by Stanley Cobb, M. D. *Archives of Neurology and Psychiatry*, 19: 981-996, June, 1928.

"Observations on the Spinal Cord of Phocaena," by Stanley Cobb, M. D., and Harold E. Pressey. *The Journal of Comparative Neurology*, December, 1928.

"Studies in Epilepsy," VIII. "The Clinical Effect of Fasting," by Stanley Cobb, M. D., and William G. Lennox, M. D. *Archives of Neurology and Psychiatry*, 20:4:771, October, 1928.

"Surgery in Chronic Dacryocystitis and Epiphora," by J. J. Corbett, M. D. *Medical Journal and Record*, August 15, 1928.

"Tear-Sac Surgery," by J. J. Corbett, M. D. *New England Journal of Medicine*, September 6, 1928.

"Plastic Daoryorhinostomy," by J. J. Corbett, M. D. *American Journal of Ophthalmology*, October 19, 1928.

"Diseased Tonsils and Evolution of their Treatments," by J. J. Corbett, M. D. *Archives of Physical Therapy, X-ray and Radium*.

"Diaphragm Excursions, Normal and Pathological," by Harold W. Dana, M. D., with P. F. Butler, M. D. *American Journal of Medical Science*, 176, 4, p. 569, October, 1928.

"The Effect of Lateral Posture in the Examination of the Chest," by Harold W. Dana, M. D. *New England Journal of Medicine*, 199, 16, p. 774, October 18, 1928.

"The Wasserman Reaction in Jaundice," by David Davis, M. D., and Nathan Sidel, M. D. *Boston Medical and Surgical Journal*, February 9, 1928.

"Plans and Progress of The Boston City Hospital," by John J. Dowling, M. D. *New England Journal of Medicine*, Vol. 198, No. 14, pp. 723-724, May 29, 1928.

"Changes in Conduction in the Presence of Alternation of the Heart," by James M. Faulkner, M. D. *Bulletin of the Johns Hopkins Hospital*, Vol. XLII, No. 5, May, 1928.

"Obituary on Dr. Ptolemy O'Meara Edson," by George W. Gay, M. D. *New England Medical Journal*, March 15, 1928.

"The Newer Knowledge of Cancer Metabolism and Some Other Aspects of Cancer Research," "A Review of the Literature," by Eugene C. Glover, M. D. *New England Journal of Medicine*, 199, 351-360, August, 1928.

"Guildcraft," by Allen Greenwood, M. D. *Magazine of Guild of Prescription Opticians of America, Inc.*, September, 1928.

"Mental Disturbances Following Operations for Cataract," by Allen Greenwood, M. D. *Journal of American Medical Association*, December 1, 1928.

"Classification, Prognosis and Control of Patients with Heart Disorders in Pregnancy," by Burton E. Hamilton, M. D. *New England Journal of Medicine*, page 292, March 29, 1928.

Discussion by Burton E. Hamilton, M. D., of paper, "Care of the Heart in Pneumonia," by George M. Albee, M. D. *New England Journal of Medicine*, August 30, 1928, p. 401.

Discussion by Burton E. Hamilton, M. D., of paper "Medical and Obstetrical Handling of Cardiac Cases in Pregnancy," by

Foster S. Kellogg, M. D., and Burton E. Hamilton, M. D. *Journal of American Medical Association*, December 22, 1928, p. 1942.

"Ideals in the Treatment of Diabetes and Methods for their Realization: New York Academy of Medicine," by Elliott P. Joslin, M. D. *New England Journal of Medicine*, 198, 379, 1928.

"The Ten Year Diabetic," by Elliott P. Joslin, M. D. *American Journal of Medical Sciences*, 175, 472, 1928.

"The Treatment of Diabetes Mellitus," by Elliott P. Joslin, M. D. *West Virginia Medical Journal*, 24, 1928.

"Diabetes and Hyperthyroidism," by Elliott P. Joslin, M. D. *American Journal of Medical Sciences*, 176, 1, 1928.

"The Dangers of Diabetes," by Elliott P. Joslin, M. D. *Missouri State Medical Journal*, 359-362, 1928.

"The Relative Position of Diabetes as a Cause of Death," by Elliott P. Joslin, M. D. *New England Journal of Medicine*, 199, 913, 1928.

"Monograph: The Treatment of Diabetes Mellitus," by Elliott P. Joslin, M. D., Lea & Febiger, Philadelphia, 1928, 4th edition.

"Diabetic Doctors," by Elliott P. Joslin, M. D. *Missouri Medical Journal*, May, 1928.

"Unilateral Deformity of the Face," by Varaztad H. Kazanjian, D. M. D., M. D. *The Journal of the American Dental Association*, January, 1928.

"The Treatment of Postoperative Complications Following the Extraction of Teeth," by Varaztad H. Kazanjian, D. M. D., M. D. *Dental Cosmos*, February, 1928.

"Epilepsy," by William G. Lennox, M. D., with Stanley Cobb, M. D., book published by Williams and Wilkins Press, Baltimore, Maryland, 1928.

"Epilepsy From the Standpoint of Physiology and Treatment," by William G. Lennox, M. D., with Stanley Cobb, M. D. *Medicine*, VII, No. 2, p. 105.

"Studies in Epilepsy, IV. Bicarbonate Content of the Blood," by William G. Lennox, M. D., with M. B. Allen. *Archives of Neurology and Psychiatry*, Vol. XX, 151-161, July, 1928.

"Ketogenic Diet in the Treatment of Epilepsy," by William G. Lennox, M. D. *New England Journal of Medicine*, Vol. 199, 74-75, July 12, 1928.

"Studies in Epilepsy, V. The Fibrin Content of the Blood,"

by William G. Lennox, M. D., with M. B. Allen. *Archives of Neurology and Psychiatry*, Vol. XX, 345-353, August, 1928.

"Studies in Epilepsy, VII. The Basal Metabolism," by William G. Lennox, M. D., with L. H. Wright. *Archives of Neurology and Psychiatry*, Vol. XX, 764, October, 1928.

"Encephalitic Respiratory Sequelae," by William G. Lennox, M. D., with H. G. Wolff. *Journal of Nervous and Mental Diseases*, Vol. 68, 337, October, 1928.

"Thyroid Crises and the Operative Treatment of Exophthalmic Goitre," editorial by Fred B. Lund, M. D. *New England Journal of Medicine*, Vol. 199, No. 6, August 9, 1928.

"A Case of Diverticulitis of the Fourth Part of the Duodenum," by Fred B. Lund, M. D. *New England Journal of Medicine*, Vol. 198, No. 19, pp. 986-988, June 28, 1928.

"Fibrosarcoma of the Pleura," by Harold E. MacMahon, M. D., and George K. Mallory, M. D. *American Journal of Pathology*, IV, 387, 1928.

"Toxemia in Pregnancy," by Reginald D. Margeson, M. D. *New England Journal of Medicine*, May 24, 1928.

"The Treatment of Pernicious Anemia with Liver or an Effective Fraction of Liver," The May Scott Newbold Lecture, XVIII, by George R. Minot, M. D. *Transactions of the College of Physicians of Philadelphia*, 1927, XLIX; 144, May, 1928.

"Treatment of Anemia," by George R. Minot, M. D. *Oxford Medicine*, Oxford Press, New pages Vol. II, 1928, 647-649 (12).

"A Familial Hemorrhagic Condition Associated with Prolongation of Bleeding Time," by George R. Minot, M. D. *American Journal of Medical Sciences*, CLXXV, 301, 1928.

"Le Traitement de l'Anemie Pernicieuse par un Regime Riche en Foie ou par un Extrait de Foie," by George R. Minot, M. D., William P. Murphy, M. D., et Edwin J. Cohn, Ph. D. *Annales de Medicine*, XXIII, 319, 1928.

"The Response of the Reticulocytes to Liver Therapy, Particularly in Pernicious Anemia," by George R. Minot, M. D., William P. Murphy, M. D., and Richard P. Stetson, M. D. *American Journal of Medical Sciences*, CLXXV, 581, 1928.

"Treatment of Pernicious Anemia with Liver Extract, Effects upon the Production of Immature and Mature Red Blood Cells," by George R. Minot, M. D., Edwin J. Cohn,

Ph. D., William R. Murphy, M. D., and Herman A. Lawson, M. D. *American Journal of Medical Sciences*, CLXXV, 599, 1928.

"The Nature of the Material in Liver Effective in Pernicious Anemia, II., by Edwin J. Cohn, Ph. D., George R. Minot, M. D., Gordon D. Alles, Ph. D., and William T. Salter, M. D. *Journal of Biological Chemistry*, LXXVII, 325, 1928.

"Selections From the Medical Writings and Sayings of Dr. Oliver Wendell Holmes," by George H. Monks, M. D. *Boston Medical and Surgical Journal*, January 26, 1928.

"The Influence of a Diet, High in Butter Fat, on Growth, Blood Formation and Blood Destruction," by Gulli Lindh Muller, M. D. *Journal of Clinical Investigation*, V. 521, 1928.

"Relation of Cholesterol and Lecithin to Remission in Pernicious Anemia," by Gulli Lindh Muller, M. D., and William B. Castle, M. D. *Proceedings of the Society of Experimental Biology and Medicine*, XXV, 567, 1928.

"Progress in Neurology for 1927," by Abraham Myerson, M. D. *New England Journal of Medicine*, August 23, 1928.

"Freud's Theory of Sex — A Criticism," by Abraham Myerson, M. D., The Macaulay Co., N. Y., December, 1928.

"The presence and importance of yeastlike fungi in the gastro-intestinal tract in pernicious anemia, in other diseases and in normal individuals," by Robert N. Nye, M. D., with Leon G. Zerfas, M. D., and M. Agnes Cornwell. *American Journal of Medical Sciences*, CLXXV, 153, 1928.

"Elevation of the Diaphragm," by Frederick W. O'Brien, M. D., Radiology, March, 1928.

"Radiation and Electrothermy in Superficial Lesions," by Frederick W. O'Brien, M. D. *New England Journal of Medicine*, Vol. 198, No. 12, 621-625, May 10, 1928.

"Cancer of Tongue and Floor of the Mouth," by Frederick W. O'Brien, M. D. *The Appolonian*, July, 1928; also in *New England Journal of Medicine*, Vol. 199, No. 20, pp. 985-986, November 15, 1928.

"The Diagnosis and Treatment of Enlarged Thymus by X-ray," by Frederick W. O'Brien, M. D. *New England Journal of Medicine*, Vol. 199, No. 14, 657-661, October 4, 1928.

"Gonococcus Septicaemia Recovery Without Cardiac Com-

plications. A Report of a Case," by Thomas J. O'Brien, M. D. *New England Journal of Medicine*, No. 4, Vol. 198, March 15, 1928.

"Education of the Public With Reference to the Cults," by Thomas J. O'Brien, M. D. *New England Journal of Medicine*, No. 16, Vol. 199, October 18, 1928.

"Some Observations on Incubated Leukemic Bloods," by Frederic Parker, Jr., M. D., and C. P. Rhoads, M. D. *American Journal of Pathology*, IV, 167, 1928.

"Observations on Blood Incubated Under Abnormal Conditions." Frederic Parker, Jr., M. D. and C. P. Rhoads, M. D. *American Journal of Pathology*, IV, 353, 1928.

"Observations on Incubated Normal Bloods," by C. P. Rhoads, M. D., and Frederic Parker, Jr., M. D. *American Journal of Pathology*, IV, 271, 1928.

"Observations on Incubated Tissues and Exudates," by C. P. Rhoads, M. D., and Frederic Parker, Jr., M. D. *American Journal of Pathology*, IV, 375, 1928.

"A Contribution to the Histology of the Tumors of the Nervus Acusticus," by C. P. Rhoads, M. D., and W. P. Van Wagenen. *American Journal of Pathology*, IV., 145, 1928.

"Two Osteoblastomas Not Connected with Bone, Histologically Identical with Osteogenic Sarcoma and Clinically Benign," by C. P. Rhoads, M. D., and Herrman Blumgart, M. D. *American Journal of Pathology*, IV, 363, 1928.

"Deaths from Alypin Poisoning," by Augustus Riley, M. D. *New England Journal of Medicine*, Vol. 199, No. 6, p. 267, August 9, 1928.

"The Present Status of Tropical Medicine in the United States," by George C. Shattuck, M. D. *American Journal of Tropical Medicine*, Vol. 8, January, 1928.

"Schistosomiasis Treated with Antimony Sodium Thioglycollate and with Antimony Thioglycollamide," by George C. Shattuck, M. D. *Journal of Tropical Medicine and Hygiene*, London, Vol. 31, May, 1928.

"Scurvy with Reference Especially to Adults," by George C. Shattuck, M. D. *Journal of American Medical Associates*, Vol. 90, June, 1928.

"Drinking Water for Travellers in the Tropics," by George C. Shattuck, M. D. *Journal of Tropical Medicine and Hygiene*, London Vol. 31, September, 1928.

"Scurvy, Pellagra, and Sprue at the Boston City Hospital,"

by George C. Shattuck, M. D. *New England Journal of Medicine*, Vol. 199, November, 1928.

"The Relation of Beri-beri to Polyneuritis from other Causes," by George C. Shattuck, M. D. *American Journal of Tropical Medicine*, Vol. 8, November, 1928.

"Diseases of Importance to the Traveller in Tropical Africa," by George C. Shattuck, M. D. *Magazine of the Missionary School of Tropical Diseases and Hygiene*, 1928, Cambridge, England.

"Undulant Fever," by Richard P. Strong, M. D. *Bedside Diagnosis*, Vol. 1, p. 37, published by Saunders & Co., Philadelphia, 1928.

"Plague," by Richard P. Strong, M. D. *Bedside Diagnosis*, Vol. 1, p. 116, published by Saunders & Co., Philadelphia, 1928.

"Tularemia," by Richard P. Strong, M. D. *Bedside Diagnosis*, Vol. 1, p. 140, published by Saunders & Co. Philadelphia, 1928.

"Leprosy," by Richard P. Strong, M. D. *Bedside Diagnosis*, Vol. 1, p. 170, published by Saunders & Co., Philadelphia, 1928.

"Asiatic Cholera," by Richard P. Strong, M. D. *Bedside Diagnosis*, Vol. 1, p. 198, published by Saunders & Co., Philadelphia, 1928.

"Report of a Case of Dermatitis Congelation with Complete Destruction of Tissues," by Townsend W. Thorndike, M. D. *New England Journal of Medicine*, August 9, 1928.

"The Role of the Thebesian Vessels in the Circulation of the Heart," by Joseph T. Wearn, M. D. *Journal of Clinical Investigation*, XLVII, 2, February 1, 1928.

"The Extent of the Capillary Bed of the Heart," by Joseph T. Wearn, M. D. *Journal of Clinical Investigation*, XLVII, 2, February 1, 1928.

"Studies of the Redundant Colon," by Franklin W. White, M. D. *New England Journal of Medicine*, May 31, 1928.

"Some Medical Aspects of the Diseases of the Gall Bladder and Bile Passages," by Franklin W. White, M. D. *New England Journal of Medicine*, October 11, 1928.

"Late Intussusception of the Bowel into the Stomach after Gastro-Enterostomy," by Franklin W. White, M. D. *New England Journal of Medicine*, December 13, 1928, and 1928 Transactions of the American Gastro-Enterological Association.

"The Liver and Biliary Passages in Middle Life and Old Age," by Franklin W. White, M. D. *Bulletin of New York Academy of Medicine*, December, 1928.

"Note on Radium Treatment of Infected Lymphoid Tissue in the Tonsils and Pharynx Especially in Acute Rheumatic Fever," by Francis H. Williams, M. D. *Transactions of the Association of American Physicians*, Vol. XLIII, p. 234, 1928.

"Radium Treatment of Tonsils and Other Lymphoid Tissues in the Throat," by Francis H. Williams, M. D. *The American Journal of Roentgenology and Radium Therapy*, Vol. XIX, No. 4, 334-340, April, 1928.

SCIENTIFIC ARTICLES READ AND ADDRESSES DELIVERED BY MEMBERS OF THE MEDICAL AND SURGICAL STAFF.

Following is a list of the scientific articles read and addresses delivered by members of the Hospital Staff during the year 1928:

"Treatment of Empyema Following Pneumonia," paper read by Horace Binney, M. D., before the Annual Meeting of the Massachusetts Medical Society, June 5, 1928.

"The Circulatory Response to Hyperthyroidism and Myxedema," address by Herrman L. Blumgart, M. D., in conjunction with Samuel Gargill, M. D., before the American Association for Clinical Investigation, also the New York Academy of Medicine.

"Fractures of the Carpal Scaphoid," demonstration of cases and discussion by Joseph H. Burnett, M. D., at Alumni Day, Boston City Hospital, Boston, Mass., April 14, 1928.

"Fractures of the Carpal Scaphoid," address by Joseph H. Burnett, M. D., before the meeting of the College of Surgeons, October 12, 1928.

"Medical and Commercial Uses of X-ray," address by P. F. Butler, M. D., before the Catholic Alumni Sodality, Boston, Mass., January 1, 1928.

"History and Development of the X-ray," address by P. F. Butler, M. D., before the Students of Holy Cross College, Worcester, Mass., March 21, 1928.

"Diagnosis and Treatment of Bone Lesions by X-ray," address by P. F. Butler, M. D., before the Brockton Hospital Staff, Brockton, Mass., April 3, 1928.

"Lesions of the Large Bowel," address by P. F. Butler, M. D., before the American College of Surgeons, Boston, Mass., October 12, 1928.

"The Thymus Gland," address by P. F. Butler, M. D., before the New England Pediatric Society, Boston, Mass., February 10, 1928.

"Treatment of Pernicious Anemia," address by William B. Castle, M. D., before the New Bedford Medical Society, New Bedford, Mass., February 10, 1928.

"The Etiological Relationship of Achylia Gastrica to Pernicious Anemia," address by William B. Castle, M. D., before the New Haven Medical Society, New Haven, Conn., October 17, 1928.

"Diseased Tonsils and Evolution of their Treatments," paper read by J. J. Corbett, M. D., before the second annual convention of Physical Therapeutics, Boston, Mass., August 19, 1927.

"Plans and Progress of the Boston City Hospital," paper read by John J. Dowling, M. D., before the Suffolk District Medical Society, December 28, 1927.

"Why an Executive Secretary," address by Miss Ellen C. Daly before the Massachusetts State Nurses Association, April 18, 1928.

"Organization," address by Miss Ellen C. Daly before the Worcester County Nurses, Worcester, Mass., May 2, 1928.

"A Standard Curriculum," address by Miss Ellen C. Daly before the Plymouth County Nurses Association, May 3, 1928.

"Vocational Training," address by Miss Ellen C. Daly before the Roxbury Mothers' Club, May 17, 1928.

"Ortho-Diagraphy of the Heart," address by James M. Faulkner, M. D., before the New England Heart Association, Winter, 1928.

"Diagnosis of Abdominal Conditions in Children," address by Eli Friedman, M. D., before the Abraham Jacobi Club, Providence, R. I., February, 1928.

"The Spirit of Co-operation," paper read by Allen Greenwood, M. D., before the meeting of the Guild of Prescription Opticians of America, Inc., New York City, June 1, 1928.

"Mental Disturbances Following Operations for Cataract," paper read by Allen Greenwood, M. D., before the Section on Ophthalmology of the American Medical Association, Minneapolis, Minn., June 15, 1928.

"Treatment of Secondary Glaucoma," paper read by Allen Greenwood, M. D., before the American College of Surgeons at session held in Boston, Mass., October 12, 1928.

"Glaucoma Problems," paper read by Allen Greenwood, M. D., before the Brooklyn Ophthalmological Society, Brooklyn, N. Y., December 21, 1928.

"The Heart,—Its Function and Disorders," address by Burton E. Hamilton, M. D., before the Young Men's Christian Association, Boston, Mass., January 20, 1928.

"Heart Failure," address by Burton E. Hamilton, M. D., before the Dedham Medical Club, Dedham, Mass., February 3, 1928, also before East Boston Medical Society, Boston, Mass., April 26, 1928.

"Heart Diseases in Pregnancy," address by Burton E. Hamilton, M. D., before the Medford Medical Society, Medford Mass., February 28, 1928, also before the Hartford County Medical Society, New England Heart Association, Hartford, Conn., April 3, 1928.

"Heart Diseases," address by Burton E. Hamilton, M. D., before the Staff of Framingham Hospital, Framingham, Mass., March 26, 1928.

"Heart Diseases Complicating Pregnancy," address by Burton E. Hamilton, M. D., before Toledo Academy of Medicine, Toledo, Ohio, April 6, 1928.

"Care of the Heart in Pneumonia," by Dr. George M. Albee; paper discussed by Burton E. Hamilton, M. D., before Massachusetts Medical Society, Worcester, Mass., June 6, 1928.

"Prognosis, Medical and Obstetrical Handling of Cardiac Cases in Pregnancy," paper by F. S. Kellogg, M. D., and Burton E. Hamilton, M. D., read by Burton E. Hamilton, M. D., before the American Medical Society, Minneapolis, Minn., June 14, 1928.

"Angina Pectoris," address by Burton E. Hamilton, M. D., before the New Hampshire State Medical Society, Hanover, N. H., September 5, 1928.

"Heart Disease in Pregnancy," address by Burton E. Hamilton, M. D., before the Dry Clinic for the American College of Surgeons at the Boston Lying-In Hospital, Boston, Mass., October 9, 1928.

"Hearts in Relation to Anesthesia and Surgery," address by

Burton E. Hamilton, M. D., before the Eastern and Canadian Anesthetists, Boston, Mass., October 12, 1928.

"Pre-operative Care of Cardiac Cases," paper read by Daniel J. Hogan, M. D., before the American College of Surgeons, Carney Hospital, Boston, Mass., October 11, 1928.

"Intestinal Parasites in Immigrants," paper read by Daniel J. Hogan, M. D., on October 12, 1928, before the American College of Surgeons, Carney Hospital, Boston, Mass., October 11, 1928.

"Chronic Prostatitis and Its Complications," paper read by Herbert H. Howard, M. D., before the Natick Medical Society, Natick, Mass., April 2, 1928.

"The Prostate from Adolescence On," paper read by Herbert H. Howard, M. D., before the Somerville Medical Society, Somerville, Mass., April 12, 1928.

"Significance of Blood in Urine," paper read by Herbert H. Howard, M. D., before the Plymouth County Medical Society, Plymouth, Mass., July 19, 1928.

"Diverticula of the Bladder," paper read by Herbert H. Howard, M. D., before the North Central Branch, American Urological Association, Columbus, Ohio, November 2, 1928.

"Diabetes and Teaching of Children," address by Elliott P. Joslin, M. D., Minneapolis, Minn., June 12, 1928.

"Anesthesia and Diabetes," address by Elliott P. Joslin, M. D., Minneapolis, Minn., June, 1928.

"Diabetic Doctors," address by Elliott P. Joslin, M. D., before the Seventy-first annual meeting of Missouri State Medical Association at Columbia, Mo., May, 1928.

"The Severe Diabetic and How to make Him Mild," address by Elliott P. Joslin, M. D., before the Cleveland Academy of Medicine, April 20, 1928; also before Springfield Academy of Medicine, September 11, 1928.

Address and Clinic, by Elliott P. Joslin, M. D., before Inter-State Post Graduate Assembly, Atlanta Ga., October 15, 1928; also before Rensselaer County Medical Society, Troy, N. Y., December 11, 1928; also in Baltimore, Md., March, 1928.

"The Treatment of Diabetes Mellitus," paper read by Elliott P. Joslin, M. D., in Yarmouth, Nova Scotia, May, 1928; also in New Haven, Conn., June, 1928.

"Oral Surgery and Surgical Prosthesis," Clinic held by

Varaztad H. Kazanjian, D. M. D., M. D., before the Connecticut State Dental Society, New Haven, Conn., April 11, 1928.

"Reconstructive Surgery of the Face," paper read by Varaztad H. Kazanjian, D. M. D., M. D., before the Androscoggin Medical Society, Portland, Me., April 28, 1928.

"Surgery in Relation to Orthodontia," paper read by Varaztad H. Kazanjian, D. M. D., M. D., before The Eastern Association of Graduates of the Angle School of Orthodontia, New York, May 14, 1928.

"Corrections of Deformities of the Tip of the Nose," paper read by Varaztad H. Kazanjian, D. M. D., M. D., before the Clinical Congress of the American College of Surgeons, Boston, Mass., October 12, 1928.

"Purpura," paper read by Ralph C. Larrabee, M. D., before the Bronx, N. Y., County Medical Society, March 21, 1928.

"Relation of Certain Physico-Chemical Processes to Epileptiform Seizures," paper read by William G. Lennox, M. D., before the American Psychiatric Association, Minneapolis, Minn., June 5, 1928.

"The Effect on Epileptic Seizures of Varying the Composition of the Respired Air," paper read by William G. Lennox, M. D., before the American Society for Clinical Investigation, Washington, D. C., April 30, 1928; also before the Newton Medical Society, Newton, Mass., March 19, 1928.

"A Case of Diverticulitis of the Fourth Part of the Duodenum," paper read by Fred B. Lund, M. D., before Framingham Medical Society, February 27, 1928.

"The Abdomen from the Medical Viewpoint," address by Joseph M. Lynch, M. D., before the Dorchester Medical Society, Dorchester, Mass., February 15, 1928.

"Oral Medicine," paper read by Francis P. McCarthy, M. D., before the Rhode Island Dental Society, January, 1928; also before the Massachusetts Dental Society, May, 1928.

"Discussion of Dermatological Cases," paper read by Francis P. McCarthy, M. D., before the New England Dermatological Society, Atlantic Conference, Dermatological Societies, Baltimore, December 7, 1928.

"Transverse Cervical Caesarian Section," paper read by Reginald D. Margeson, M. D., before the American College of Surgeons, October, 1928.

"The Treatment of Pernicious Anemia," lecture by George R. Minot, M. D., before the Medical and Chirurgical Society of Montreal, at Montreal, P. Q., January, 1928; also before the Harvey Society, New York, March, 1928.

"Pernicious Anemia," address by George R. Minot, M. D., before American Academy of Arts and Sciences, Boston, Mass., January, 1928.

"The Importance of Diet in the Treatment of Anemia," by George R. Minot, M. D., a Sunday Public Lecture under the auspices of Harvard University, Boston, Mass., January, 1928.

"Treatment of Pernicious Anemia with Liver Extract," address by George R. Minot, M. D., before Peter Bent Brigham Hospital Alumni Association, Boston, Mass., April, 1928; also before Alumni Reunion of Boston City Hospital, Boston, April 14, 1928.

"The Treatment of Anemia," address by George R. Minot, M. D., before Boston University Medical Club, Boston, May, 1928.

"Disorders of Blood Formation," address by George R. Minot, M. D., before the Hancock County (Maine) Medical Society, Bar Harbor, August, 1928.

"Treatment of Anemia," paper read by George R. Minot, M. D., before Kansas City Southwest Clinical Society, Kansas City, October, 1928. Paper given by William P. Murphy, M. D., who was joint author with George R. Minot, M. D.

"The Dietary Treatment of Anemia," address by George R. Minot, M. D., before American College of Surgeons, Boston, October, 1928.

"The Importance of Diet in the Treatment of Anemia," address by George R. Minot, M. D., before Simmons College School of Social Work, Boston, December, 1928.

"Series of Perforated Ulcers of the Stomach and Duodenum Operated on Under Novocain Local Anesthesia with Posterior Gastro-Enterostomy and Closure of the Abdomen Without Drainage," address by William R. Morrison, M. D., before the Boston City Hospital Clinical Meeting, March 31, 1928.

"The Management of Perforated Peptic Ulcers," address by William R. Morrison, M. D., before the Berkshire County Medical Society, Pittsfield, Mass., June 14, 1928.

"The Treatment of Perforated Ulcers of the Stomach and Duodenum," address by William R. Morrison, M. D., before

Clinical Congress of American College of Surgeons, Cheever Amphitheatre, Boston City Hospital, October 9, 1928.

Discussion by William R. Morrison, M. D., of Dr. Franklin W. White's paper, "Late Intussusception of the Bowel Into the Stomach After Posterior Gastro-Enterostomy," before Clinical Congress of American College of Surgeons, Cheever Amphitheatre, Boston City Hospital, October 9, 1928.

Discussion by William R. Morrison, M. D., of Dr. Otto Herrmann's paper, "Acute Osteomyelitis of the Ilium," before Clinical Congress of American College of Surgeons, Cheever Amphitheatre, Boston City Hospital, October 9, 1928.

"Observations on a Series of Perforated Ulcers of the Stomach and Duodenum Operated on Under General, Local, and Pitkin's Spinal Anesthesia," address by William R. Morrison, M. D., before Brockton Hospital Staff meeting, Brockton, Mass., October 16, 1928.

"A Series of Fifty Acute Perforations of the Stomach and Duodenum," from the First, Second, Third, Fourth and Fifth Surgical Services of the Boston City Hospital," address by William R. Morrison, M. D., before the Surgical Section, Symposium on Stomach Surgery, Combined Meeting of the Boston Medical Library, Suffolk District Medical Society, Middlesex South District Medical Society, and Norfolk District Medical Society, December 19, 1928.

"The Influence of Extracted Liver on Blood Regeneration," paper read by Gulli Lindh Muller, M. D., before meeting of the Federation of American Societies for Experimental Biology, Ann Harbor, April 14, 1928.

"The Bone Marrow," address by Gulli Lindh Muller, M. D., at Staff meeting, New England Hospital for Women and Children, Boston, June 21, 1928.

"Mental Diseases," address by Abraham Myerson, M. D., before Tufts Dental College, Boston, January 9, 1928.

"Brain Trauma," address by Abraham Myerson, M. D., before the New York Physicians' Association, January 25, 1928.

"Mental Hygiene," address by Abraham Myerson, M. D., before the Essex County District Medical Society, February 8, 1928.

"Worry and Sleep," address by Abraham Myerson, M. D., before Greater Boston Medical Society, Boston, February 12, 1928.

"Mental Hygiene Problems of Adult Life," address by Abraham Myerson, M. D., before New York Committee on Mental Hygiene, February 21 and 28, 1928.

"Central Nervous System in Relationship to Vision," address by Abraham Myerson, M. D., before Optometrists' Convention, March 12, 1928.

"Inheritance and Environment," address by Abraham Myerson, M. D., before Colgate University, October 10, 1928; before Oneida County Mental Health Committee, Utica, N. Y., October 10, 1928, and before Tufts College Biology Club, Boston, December 11, 1928.

"Crime and Criminals," address by Abraham Myerson, M. D., before Somerville Medical Society, December 5, 1928.

"Cellular Response in Rabbits to Repeated Injections of Non-hemolytic Streptococci," paper read by Robert N. Nye, M. D., before American Association of Pathology and Bacteriology, Washington, D. C., May, 1928; also before Biology Club, Harvard Medical School, December, 1928.

"Experimental Liver Necrosis in Rabbits," paper read by Robert N. Nye, M. D., before American Society for Clinical Investigation, Washington, D. C., May, 1928.

"Non-hemolytic Streptococci and Acute Rheumatic Fever," paper read by Robert N. Nye, M. D., before Seminar, Department of Bacteriology, Harvard Medical School, April, 1928.

"Leukemia," discussion of Doctor Libby's case by Frederick W. O'Brien, M. D., at monthly staff meeting, Boston City Hospital, January 28, 1928.

"The Diagnosis and Treatment of Enlarged Thymus by X-Ray," address by Frederick W. O'Brien, M. D., before the Cambridge City Hospital Staff meeting, March 13, 1928, and before the Annual Meeting, Connecticut Medical Society, Bridgeport, Conn., May 23, 1928.

"The Nursing Sister," paper read by Frederick W. O'Brien, M. D., before Graduating Nurses, Cambridge City Hospital, Cambridge, Mass., June 1, 1928.

Discussion by Frederick W. O'Brien, M. D., of "Thyrotoxicosis Treated by Physical Therapy Methods," paper by H. G. Wahlig, M. D., before the American Electro-therapeutic Association, Hotel Statler, Boston, Mass., September 12, 1928.

"The Diagnosis and Treatment of Enlarged Symptomless Thymus," address by Frederick W. O'Brien, M. D., before Annual Meeting, American Roentgen Ray Society, Kansas

City, Mo., September 26, 1928; also before Meeting of American Academy of Physio-therapy, New York City, October 19, 1928.

"Recent Advances in Physical Therapy," address by Frederick W. O'Brien, M. D., before Meeting of Norfolk District Medical Society, Boston Medical Library, November 21, 1928; also before meeting of Connecticut State Medical Society, Hartford, Conn., December 3, 1928.

"Responsibilities Confronting the Young Professional Man," address by Thomas J. O'Brien, M. D., before the Louis Pasteur Club of Boston, February 14, 1928.

"The Increasing Incidence of Malpractice Suits," address by Thomas J. O'Brien, M. D., before the Massachusetts Society of Examining Physicians, Boston, February 15, 1928.

"Education of the Public With Reference to the Cults," address by Thomas J. O'Brien, M. D., before the New England Medical Council at Belgrade Lakes, Me., June 19, 1928.

"Menacing Functional Hemorrhage of the Ovary," paper read by George W. Papen, M. D., at Clinical Meeting of the American College of Surgeons' Convention at the Boston City Hospital on October 12, 1928.

"Physio-therapy in Facial Paralysis," analysis of a series of cases with reference to the etiology, electro-diagnosis, prognosis and treatment, paper read by Joseph Resnik, M. D., before the American Academy of Physio-therapy, October 20, 1928.

"Deaths from Alypin Poisoning," paper read by Augustus Riley, M. D., before the New England Branch of the American Urological Association, April 3, 1928.

"Acute and Chronic Myocarditis," lecture by William H. Robey, M. D., before Springfield Academy of Medicine, March 2, 1928.

"Pneumonia," lecture by William H. Robey, M. D., before Springfield Academy of Medicine, March 9, 1928; also before Pentucket Medical Society, Haverhill, Mass., November 9, 1928.

"Hypertension," lecture by William H. Robey, M. D., before Springfield Academy of Medicine, March 16, 1928.

"Acute Rheumatism," lecture by William H. Robey, M. D., before Springfield Academy of Medicine, March 23, 1928.

"Cardiac Diseases in Children," lecture by William H. Robey, M. D., before Boston University, Boston, April 17, 1928.

"Discussion of Treatment of Pneumonia," lecture by William H. Robey, M. D., before Massachusetts Medical Society, June 6, 1928.

"Heart During Exercise," discussion of paper by William H. Robey, M. D., before American Medical Society, June 11, 1928.

"Pneumococcus Antibody Solution," discussion of paper by William H. Robey, M. D., before American Medical Society, June 13, 1928.

"Prevention of Heart Disease," radio talk by William H. Robey, M. D., before New England Heart Association, August 9, 1928.

"Use of Pneumonia Antibody Solution," clinical discussion by William H. Robey, M. D., before Beth Israel Hospital, Boston, December 10, 1928.

"The Present Status of Tropical Medicine in the United States," Presidential address by George C. Shattuck, M. D., to American Society of Tropical Medicine, 1928.

"Scurvy with Reference Especially to Adults," paper read by George C. Shattuck, M. D., before American Climatological and Clinical Association, May 2, 1928.

"Scurvy, Pellagra and Sprue at the Boston City Hospital," paper read by George C. Shattuck, M. D., before Boston City Hospital Alumni Day meeting, April 14, 1928.

"The Relation of Beri-beri to Polyneuritis from Other Causes," paper read by George C. Shattuck, M. D., before American Society of Tropical Medicine, May 2, 1928.

"Surgical Aspects of a Few Tropical Diseases," paper read by George C. Shattuck, M. D., before American Congress of Surgeons, October 9, 1928.

"Deficiency Diseases," informal talk by George C. Shattuck, M. D., at United States Naval Hospital, Chelsea, Mass., October 29, 1928.

"Some Parasitic Infections Observed in Equatorial Africa," Presidential address of Richard P. Strong, M. D., before the American Society of Parasitologists, Nashville, Tenn., December 27-31, 1927.

"Medical Observations Relating to Equatorial Africa," talk by Richard P. Strong, M. D., at Boston Medical Library, January 17, 1928.

"The Harvard-African Expedition of 1927 with Reference

to Biology and Medicine," lecture by Richard P. Strong, M. D., at Peter Bent Brigham Hospital, Boston, Mass., March 13, 1928.

"Health Conditions in Equatorial Africa Contrasted with those in Countries where Sanitation Prevails," lecture by Richard P. Strong, M. D., at Harvard Medical School, Boston, March 25, 1928.

"Harvard-African Expedition of 1926-27," lecture by Richard P. Strong, M. D., at Johns Hopkins School of Hygiene, DeLamar Lecture, April 17, 1928.

"Studies on Human and Animal Diseases," address by Richard P. Strong, M. D., at American Philosophical Society, Philadelphia, Pa., April 20, 1928.

"Recent Advances in Tropical Medicine," Morris Herzstein Foundation Lecture by Richard P. Strong, M. D., Stanford University, California, May 2, 3, 1928.

"Neoplasms of Parasitic Origin," paper read by Richard P. Strong, M. D., before Association of American Physicians, Washington, D. C., May 1, 2, 3, 1928.

"Treatment of Spastic Paralysis," talk of John J. Thomas, M. D., before the Massachusetts Physio-Therapy Association, Inc., October 9, 1928.

"The Cult of Aesculapius," address by Townsend W. Thorndike, M. D., before the Phi Delta Epsilon Medical Fraternity, March 15, 1928.

"The Behavior of Lung Capillaries as Observed Directly in the Intact Chest of a Cat," address by Joseph T. Wearn, M. D., before The American Physiological Society, Ann Arbor, Mich., April 13, 1928.

"Relation of the Coronary Circulation to Heart Disease," address by Joseph T. Wearn, M. D., before New York State Medical Society Convention, Albany, N. Y., May 24, 1928.

An address by Joseph T. Wearn, M. D., before the Roxbury Clinical Record Club, Boston, Mass., May 8, 1928.

"Diagnosis and Treatment of Redundant Colon," address by Franklin W. White, M. D., before Roxbury Clinical Record Club, January 10, 1928.

"Facts about Food," address by Franklin W. White, M. D., before Boston Young Men's Christian Association. Boston, Mass., January 13, 1928.

"Food and Digestion," address by Franklin W. White, M. D., before Two State Society of Physical Directors, February 16, 1928.

"Modern Diagnosis of Diseases of the Gall Bladder," address by Franklin W. White, M. D., before the Springfield Academy of Medicine, April 10, 1928.

"Some Medical Aspects of the Diseases of the Gall Bladder and Bile Passages," address by Franklin W. White, M. D., before the Massachusetts Medical Society Surgical Section, June 5, 1928.

"Late Intussusception of the Bowel into the Stomach after Gastro-Enterostomy," address by Franklin W. White, M. D., before Gastro-Enterological Association, April 30, 1928; also before American College of Surgeons, October 9, 1928.

"The Liver and Biliary Passages in Middle Life and Old Age," address by Franklin W. White, M. D., before New York Academy of Medicine, New York, October 12, 1928.

HOUSE OFFICERS.

The Herbert L. Burrell Ether Prize, given for administering anesthetics in the most skilful and humane manner, was awarded to William S. Justice, M. D., of the Second Surgical Service, John W. Burke, M. D., of the Fourth Surgical Service and Edward M. Smith, M. D., of the First Surgical Service.

CHANGES IN THE HOSPITAL RULES.

The Rules of the Trustees have been changed by the creation of a Sixth Surgical Service for the care of Bones and Joints, the creation of a Neuro-Surgical Service to furnish surgical co-operation to the Neurological Service, and the creation of an Afternoon Medical Out-Patient Clinic.

The following new positions have been created: Director of Surgical Research, Associate Surgeon to the Harvard Surgical Teaching Service, four new positions for Junior Visiting Physicians, so changing the number from sixteen to twenty; four new positions as Junior Visiting Surgeon for Gynecology and Obstetrics, so changing the number from two to six; two new positions as Visiting Physician for Physical Therapeutics, so changing the number from one to three; two new posi-

tions as Assistant Visiting Physician for Physical Therapeutics, so changing the number from one to three. Positions for Resident Physicians and Surgeons have been created for the following services: Fifth Surgical, Sixth Surgical, Second Medical, Neuro-Surgical, Afternoon Medical Out-Patient Clinic.

Rule 3, designating the members of the Senior Staff, was changed to read "Six Surgeons-in-Chief" instead of five, and "Six Visiting Surgeons" instead of five.

It has been decided to increase the number of House Officers on each Medical Service from five to six, the terms of service being shortened from twenty to eighteen months, with shifts every three instead of every four months, the extra man being titled "Assistant House Physician," with some of the duties of the present House Physician and some of the duties of the present Senior House Officer. This change will occur as soon as it can be arranged.

The number of House Officers in the Gynecological and Obstetrical Service has been increased from four to six, and their period of service has been lengthened from sixteen months and two weeks to eighteen months and two weeks, the duties of the House Officers in the various classes being changed.

A Public Relations Committee has been created, consisting of a member of the Board of Trustees, the Superintendent, a member of the Surgical Visiting Staff, a member of the Medical Visiting Staff, and such other person or persons as the Trustees may appoint. All publicity communications will first be submitted to and acted upon by this Committee.

A rule has been made that no discharged employee shall be reinstated without the consent of the Board of Trustees.

For the Sanatorium Division, the Rules have been made that no more children be admitted, the children patients there now to be gradually eliminated through discharge: also that all admissions to the Sanatorium

Division be made at the office of the Director of Tuberculosis, Boston Health Department.

GIFTS AND BEQUESTS.

Mr. Abraham Shuman, late President of the Board of Trustees, bequeathed to the hospital \$100,000 for the erection on city land of a building to be known as the "A. Shuman Building for Convalescent Men." On September 21, 1928, the Trustees voted to accept this bequest.

In September, Mr. Augustus Hemenway presented to the hospital the sum of \$3,000 to be used for the employment of special nurses for needy patients, also a sum of money to be known as the Augustus Hemenway Fund to be expended under the supervision of Dr. Horace Binney for instruments and apparatus.

Under the will of Julia M. Robey, \$2,857.84 was received for the benefit of the Convalescent Home. This will be spent by the Trustees for improvements at the Home.

Income amounting to \$1,824.51 has been received during the year from the estate of the late Dr. Albert N. Blodgett. This has been added to the fund, the interest of which is used to employ special nurses for needy patients.

The final payment from the estate of the late Joseph Thompson has been received, the entire income from the estate during the past year, amounting to \$236.09. This was added to the fund, the income of which is expended for special nurses.

From the estate of Ann M. Fosdick, the final payment of \$600 has been received. This was added to the fund, the income of which is used for special nurses.

At Christmas time, many toys, books and other gifts for the comfort and pleasure of hospital patients were received from clubs, schools and kind people, and during the year numerous other gifts have been received through the Department of Social Work.

The Trustees wish to again express to his Honor the Mayor and the City Council their appreciation for their generous support, which has made possible what has been accomplished at the Hospital during the past year.

They are likewise very appreciative of the work of the Superintendent and his Assistants.

Respectfully submitted,

JOSEPH P. MANNING, *President.*

HENRY S. ROWEN, M. D., *Secretary.*

GEORGE G. SEARS, M. D.

CARL DREYFUS.

ALEXANDER WHITESIDE.

REPORT OF THE SUPERINTENDENT AND MEDICAL DIRECTOR.

BOSTON CITY HOSPITAL, January 7, 1929.

To the Trustees:

GENTLEMEN,— I present herewith the annual report of the Hospital Department for the year 1928.

On June 1, 1864, The Boston City Hospital was opened for the admission of patients. Since that time the number of house patients treated in the different departments has been 706,946 and the number of out-patients, 2,575,919. The table on page 106 shows the number of patients who have been treated in the hospital proper and the South Department during the last ten years. The principal statistics for the past year are shown on pages 108 and 109. The other tables are self-explanatory.

Patients treated in the hospital during the year:

Medical services	6,683
Surgical services	7,964
Gynecological and obstetrical services	4,561
Pediatric service	921
Ophthalmic service	168
Aural and laryngological service	2,781
Neurological service	358
Dermatological service	140
Total	<u>23,576</u>

Number of visits of patients to the hospital for advice and treatment in the Out-Patient Departments:

Medical diseases	27,260
Surgical diseases	102,995
Carried forward	<u>130,255</u>

<i>Brought forward</i>	130,255
Diseases of women and obstetrical service	9,050
Diseases of the eye	11,729
Diseases of the ear and throat	15,727
Diseases of the skin	20,049
Diseases of the nervous system	2,531
Pediatric cases including baby hygiene	7,460
X-ray diagnosis and treatment	16,908
Physical therapeutics	50,972
Vaccine and serum inoculation	10,265
Metabolism	4,710
Oral surgery	2,169
Blood cases	452
Cardiac cases	790
Gastro-intestinal cases	772
Tropical diseases	12
Goiter	15
Accident cases	7,691
Total	<u>291,557</u>

TABLE OF ADMISSIONS AND DEATHS FROM FEBRUARY 1, 1919, TO JANUARY 1, 1929.
Hospital Proper and South Department.

	Patients Admitted.	Patients Accidentally Injured Admitted.	Number of Out- Patients Treated.	Number of Patients in Hospital at Beginning of Year.	Number of Ward Patients Treated.	Died.	Rate of Mortality.
February 1, 1919, to January 31, 1920.....	17,593	1,577	31,103	861	18,454	1,382	.075
February 1, 1920, to January 31, 1921.....	16,406	1,215	28,896	902	17,308	1,359	.079
February 1, 1921, to January 31, 1922.....	18,844	1,915	32,377	979	19,823	1,400	.071
February 1, 1922, to January 31, 1923.....	22,174	2,601	37,419	993	23,167	1,796	.078
February 1, 1923, to January 31, 1924.....	23,181	2,485	38,690	1,097	24,278	1,861	.077
February 1, 1924, to January 31, 1925.....	23,646	2,675	45,095	1,150	24,796	1,785	.072
February 1, 1925, to December 31, 1925.....	20,349	2,149	44,750	1,130	21,479	1,627	.076
January 1, 1926, to December 31, 1926.....	21,460	1,928	45,994	884	22,344	1,759	.079
January 1, 1927, to December 31, 1927.....	24,280	1,426	49,059	919	25,199	1,882	.075
January 1, 1928, to December 31, 1928.....	24,462	1,448	52,610	977	25,510	1,913	.077

The total number of patients admitted to the wards since the opening of the hospital and South Department has been 656,436 and the number of out-patients has been 1,348,278.

HOSPITAL PROPER.

 APPLICANTS EXAMINED FOR ADMISSION DURING THE
YEAR 1928.

MONTH.	Number Examined.	Number Admitted.	Number not Admitted.
January.....	1,896	1,829	67
February.....	1,831	1,778	53
March.....	2,096	2,039	57
April.....	2,060	2,007	53
May.....	2,224	2,171	53
June.....	1,994	1,944	50
July.....	1,997	1,944	53
August.....	2,049	2,000	49
September.....	1,827	1,787	40
October.....	1,929	1,900	29
November.....	1,709	1,675	34
December.....	1,692	1,669	23
Totals.....	23,304	22,743	561

HOSPITAL PROPER.

PRINCIPAL STATISTICS FOR THE YEAR 1928.

Number of Patients.

Number of patients remaining in the hospital proper December 31, 1927	833
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Admitted during the year 1928:

Medical	6,377	
Surgical	7,649	
Gynecological and obstetrical	4,442	
Pediatric	888	
Ophthalmic	163	
Aural and laryngological	2,750	
Neurological	338	
Dermatological	136	
	<hr/>	22,743

Treated during the year	23,576
Discharged during the year	20,893
Died during the year	1,815
	<hr/>
	22,708

Number of patients remaining in the hospital proper December 31, 1928	868
Number of births during year	1,404
Number of deaths	1,815
Number of deaths within forty-eight hours of admis- sion	645
Largest number of patients in hospital on any one day,	1,054
Smallest number of patients in hospital on any one day,	757
Daily average number of patients	937.4
Average number of days' stay of patients	10.3
Number of weeks' treatment given in hospital	49,011
Number of days' treatment given in hospital	343,079
Number of applicants for admission to hospital	23,304
Number of applicants rejected	561
Number of out-patients treated during year	52,610
Number of visits made by out-patients during year	291,557
Patients carried in ambulances	8,123
Number of patients accidentally injured admitted to the wards	1,448

Number of out-patients treated in the Out-Patient Departments, classified according to diseases:

For medical diseases	9,113
For surgical diseases	21,928
For gynecological and obstetrical service	1,774
For diseases of the eye	2,474
For diseases of the ear and throat	5,374
For diseases of the skin	3,281
For diseases of the nervous system	852
For pediatric cases, including baby hygiene	2,516
For X-ray diagnosis and treatment	13,781
For physical therapeutics	4,030
For vaccine and serum inoculation	1,307
For metabolism	321
For oral surgery	1,672
Blood cases	123
Cardiac cases	157
Gastro-intestinal cases	139
For tropical diseases	5
For goitre	15
For accident cases	7,691
	<hr/>
	76,553

Less patients counted more than once:

In Medical Department	149
In Neurological Department	852
In Pediatric Department	824
In X-Ray Department	10,654
In Department of Physical Therapeutics	4,030
In Department of Immunology	1,140
In Clinic for Metabolism	321
In Department of Oral Surgery	1,203
In Blood Service	42
In Cardiac Clinic	157
In Gastro-Intestinal Clinic	139
In Service for Tropical Diseases	5
Accident cases	4,427
	<hr/>
	23,943

Total number of out-patients treated 52,610

PRESENT CAPACITY OF THE HOSPITAL DEPARTMENT.

The schedule of beds is as follows:

	Beds.	Cribs.	Bassinettes.	Totals.
Hospital proper.....	989	38	96	1,123
South Department.....	115	217	6	338
Sanatorium Division.....	341	.....	.....	341
Haymarket Square Relief Station.....	28	1	.....	29
East Boston Relief Station.....	11	1	.....	12
Convalescent Home.....	34	.....	.....	34
Totals.....	1,518	257	102	1,877

The distribution of beds in the Main Department is as follows:

SERVICES.	WARDS.							PRIVATE.				Grand Totals.
	Males.	Females.	Both Sexes.	Children (Males).	Children (Females).	Children (Both Sexes).	Totals.	Males.	Females.	Both Sexes.	Totals.	
Medical.....	92	128	...	...	...	1	221	...	4	15	19	240
Surgical.....	157	148	29	...	...	8	342	14	12	...	26	368
Obstetrical.....	...	60	...	...	...	89	149	...	...	...	...	149
Gynecological.....	...	55	...	...	...	...	55	...	...	...	...	55
Neurological.....	7	...	6	...	...	5	18	...	...	...	...	18
Ophthalmic, aural and all services.....	9	5	...	...	...	...	14	...	...	...	...	14
Dermatological.....	5	5	...	...	...	...	10	...	...	...	...	10
Pediatric and all services.....	...	...	...	27	28	72	127	...	...	...	...	127
All services.....	86	40	12	...	...	...	138	...	4	...	4	142
Totals.....	356	441	47	27	28	175	1,074	14	20	15	49	1,123

STATISTICS OF PATIENTS ACCORDING TO SERVICES.
Year 1928.

SERVICES.	In Hospital January 1, 1928.	Admitted.	Discharged.	Died.	Total Discharged and Died.	In Hospital January 1, 1929.
First Surgical.....	58	1,524	1,427	96	1,523	59
Second Surgical.....	78	1,507	1,421	113	1,534	51
Third Surgical.....	43	1,483	1,408	80	1,488	38
Fourth Surgical.....	51	1,522	1,423	89	1,512	61
Fifth Surgical.....	85	1,470	1,390	106	1,496	59
Sixth Surgical.....		143	97	1	98	45
Gynecological and Obstetrical..	119	4,442	4,273	130	4,403	158
First Medical.....	77	1,585	1,317	249	1,566	96
Second Medical.....	58	1,555	1,302	265	1,567	46
Third Medical.....	69	1,580	1,338	259	1,597	52
Fourth Medical.....	102	1,657	1,406	245	1,651	108
Pediatric.....	33	888	742	148	890	31
Ophthalmic.....	5	163	164	.....	164	4
Aural and Laryngological.....	31	2,750	2,735	11	2,746	35
Neurological.....	20	338	322	22	344	14
Dermatological.....	4	136	128	1	129	11
Totals.....	833	22,743	20,893	1,815	22,708	868

RECEIPTS AND EXPENDITURES.

Receipts.

RECEIPTS.	All Depart- ments Except Sanatorium Division.	Sanatorium Division.
City appropriation.....	\$2,109,960 07	\$419,370 49
Interest on trust funds.....	2,594 96	
	\$2,112,555 03	\$419,370 49
Add:		
Deficit.....	73,073 48	
Deduct:		
Balance returned to City Treasury.....		38,487 79
Totals.....	\$2,185,628 51	\$380,882 70
EXPENDITURES.		
Hospital proper and its subdivisions.....	\$1,542,779 78	
Out-Patient Department.....	192,804 54	
South Department.....	297,944 09	
Haymarket Square Relief Station.....	84,686 09	
East Boston Relief Station.....	42,506 78	
Convalescent Home.....	19,654 06	
West Department.....	5,253 17	
Sanatorium Division.....		380,882 70
Totals.....	\$2,185,628 51	\$380,882 70

MAIN HOSPITAL.

*Applicants not Admitted from January 1, 1928,
to December 31, 1928, Inclusive.*

	At First Rejected.	Admitted Later.	Finally Rejected.
Self-rejected or deferred.....	221	.....	171
Self-rejected or deferred, but admitted within three days.....		40	.....
Self-rejected or deferred, but admitted later.....		10	.....
State settlement.....	102	.....	70
State settlement, but admitted within three days.....		16	.....
State settlement, but admitted later.....		16	.....
For want of accommodation.....	357	.....	276
For want of accommodation but admitted within three days.....		10	.....
For want of accommodation but admitted later.....		71	.....
Non-resident.....	42	.....	29
Non-resident but admitted within three days.....		4	.....
Non-resident but admitted later.....		9	.....
For lack of sufficient information.....	2	2	.....
Referred to other public institutions.....	17	2	15
Totals.....	741	180	561

RECORD OF AMBULANCE WORK.

YEAR 1928.

Transportation to the Hospital.

Trips to:

Business center	206
North End	176
West End	298
Back Bay	265
South End	964
Roxbury	1,065
West Roxbury	43
Dorchester	768
South Boston	574
East Boston	624
Charlestown	578
Jamaica Plain	288
Brighton	219
<i>Carried forward</i>	<u>6,068</u>

<i>Brought forward</i>	6,068
Roslindale	103
Hyde Park	63
South Department	50
Total trips in	6,284
Did not come	72
Patients brought	<u>6,212</u>
<i>Transportation from the Hospital.</i>	
Convalescent Home	316
Patients' Homes	130
Other hospitals	510
Trips out	956
Carried extra	1,353
Patients carried	<u>2,309</u>

Summaries.

Total number of trips	7,240
Total number of patients carried	<u>8,521</u>

Record of Work Done by Sedan.

	Trips.	Miles.
Bringing physicians and surgeons, also carrying house officers to obtain autopsy permits,	1,135	6,639
Carrying patients to Convalescent Home	316	3,476
Totals	<u>1,451</u>	<u>10,115</u>

CENSUS OF DAYS' BOARD OF ALL PERSONS.

YEAR 1928.

	Patients.	Officers and Em- ployees.	House Officers.	Special Nurses.	Total Days' Board.
Hospital Proper.....	343,079	276,923	23,058	23,167	666,227
South Department.....	60,095	46,494	4,474	1,123	112,186
Haymarket Square Relief Station....	3,819	13,148	2,187	539	19,693
East Boston Relief Station.....	311	7,784	.....	9	8,104
Convalescent Home.....	5,322	2,746	.....	.....	8,068
Totals.....	412,626	347,095	29,719	24,838	814,278
Sanatorium Division.....	127,165	44,593	.....	.....	171,758
Totals.....	539,791	391,688	29,719	24,838	986,036

DAILY AVERAGE OF PERSONS.
YEAR 1928.

	Patients.	Officers and Em- ployees.	House Officers.	Special Nurses.	Total All Persons.
Hospital Proper.....	937.4	756.6	63.0	63.3	1,820.3
South Department.....	164.2	127.0	12.2	3.1	306.5
Haymarket Square Relief Station....	10.4	35.9	6.0	1.5	53.8
East Boston Relief Station.....	.8	21.3	.....	.....	22.1
Convalescent Home.....	14.5	7.5	.....	.....	22.0
Totals.....	1,127.3	948.3	81.2	67.9	2,224.7
Sanatorium Division.....	347.5	121.8	.....	.....	469.3
Totals.....	1,474.8	1,070.1	81.2	67.9	2,694.0

MAXIMUM AND MINIMUM NUMBER OF DAYS'
BOARD GIVEN.

YEAR 1928.

	Hospital Proper.	South Department.	Haymarket Square Relief Station.	East Boston Relief Station.	Convalescent Home.	All Departments (Except Sanatorium Division).	Sanatorium Division.	All Departments.
Maximum number of days' board of patients.....	1,054	289	19	6	27	1,332	374	1,696
Minimum number of days' board of patients.....	757	62	1	0	4	878	316	1,211
Maximum number of days' board of persons.....	1,942	453	75	29	35	2,477	494	2,962
Minimum number of days' board of persons.....	1,638	163	40	21	12	1,934	434	2,377

NATIVITY OF PATIENTS ADMITTED DURING YEAR 1928.

Boston	9,088	<i>Brought forward,</i>	21,186
Other cities and towns in Massachusetts	3,716	Armenia	35
Maine	464	Norway	29
New Hampshire	239	China	28
Vermont	115	Finland	27
Rhode Island	159	France	24
Connecticut	108	Denmark	17
Other states	1,175	Spain	14
Ireland	2,139	Holland	13
British Provinces	1,415	Roumania	11
Italy	633	Turkey	10
Russia	593	South America	7
England	265	Australia	6
Newfoundland	181	Belgium	4
Poland	157	Palestine	4
Scotland	138	Albania	2
Lithuania	119	Asia Minor	2
Sweden	108	Cape Verde Islands	2
Germany	104	Czecho Slovakia	2
Greece	72	Africa	1
West Indies	60	Azores	1
Austria	55	Mexico	1
Portugal	44	Switzerland	1
Syria	39	Virgin Islands	1
		Unknown	1,315
		Total	<u>22,743</u>
<i>Carried forward,</i>	21,186		

CONDITION OF PATIENTS DISCHARGED DURING YEAR 1928.

Well	1,136	<i>Brought forward,</i>	20,872
Relieved	17,278	Eloped	21
Not relieved	2,458	Died	1,815
		Total	<u>22,708</u>
<i>Carried forward,</i>	20,872		

SOUTH DEPARTMENT.

PRINCIPAL STATISTICS FOR THE YEAR 1928.

Number of patients remaining in the South Department December 31, 1927	215
Admitted from January 1, 1928, to December 31, 1928, inclusive	1,719
Treated during the year	1,934
Discharged during the year	1,727
Died during the year	98
	<hr/>
	1,825
Number of patients remaining December 31, 1928	109
Maximum number of patients at any one time	289
Minimum number of patients at any one time	62
Daily average number of patients	164.2
Average number of days' stay of patients.	31.07
Number of days' treatment given patients	60,095
Number of weeks' treatment given patients	8,585
Number of patients admitted over 15 years of age	336
Average age of patients	9.33
Number of patients dying within 48 hours of admission,	41
Percentage of deaths to discharges	5.37
Death rate from all diseases	5.07
Death rate from all diseases deducting deaths within 24 hours of admission	3.72
Number of applicants examined for admission	1,835
Number of applicants rejected	116
Number of patients carried in ambulances	1,291
Number of surgical operations	151

NATIVITY OF PATIENTS ADMITTED TO THE SOUTH
DEPARTMENT FOR THE YEAR 1928.

Boston	1,020	<i>Brought forward,</i>	1,615
Other cities and towns in Massa- chusetts	284	Sweden	2
Maine	36	Greece	2
New Hampshire . .	24	Albania	1
Vermont	10	Poland	1
Rhode Island . . .	13	West Indies . . .	1
Connecticut	9	Italy	4
Other states	77	Germany	1
British Provinces . .	99	Lithuania	1
Ireland	37	Russia	5
Scotland	5	France	1
England	1	Denmark	1
		Mexico	1
		Unknown	83
<i>Carried forward,</i>	1,615	<i>Total</i>	<u>1,719</u>

CONDITION OF PATIENTS DISCHARGED FROM THE
SOUTH DEPARTMENT FOR THE YEAR 1928.

Well	1,588	<i>Brought forward,</i>	1,727
Relieved	58	Died	98
Not relieved	81		
<i>Carried forward,</i>	1,727	<i>Total</i>	<u>1,825</u>

APPLICANTS EXAMINED FOR ADMISSION TO THE SOUTH
DEPARTMENT FOR THE YEAR 1928.

MONTH.	Number Examined.	Number Admitted.	Number Not Admitted.
January.....	241	235	6
February.....	259	238	21
March.....	257	233	24
April.....	233	214	19
May.....	201	194	7
June.....	145	140	5
July.....	101	94	7
August.....	88	82	6
September.....	52	50	2
October.....	74	65	9
November.....	70	66	4
December.....	114	108	6
Totals.....	1,835	1,719	116

APPLICANTS NOT ADMITTED TO SOUTH DEPARTMENT
FOR THE YEAR 1928.

CAUSE OF REJECTION.	1928. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Self-rejected.....	2	1	5	3	2	3	1	1	...	4	3	1	26
Want of accommodation.....	3	16	11	3	...	...	1	...	...	...	...	...	34
No contagious disease.....	1	4	8	13	5	2	5	5	2	5	1	5	56
Totals.....	6	21	24	19	7	5	7	6	2	9	4	6	116

RECORD OF AMBULANCE WORK IN BRINGING PATIENTS
TO SOUTH DEPARTMENT FOR THE YEAR 1928.

Trips to:	
Business center	5
North End	8
West End	68
Back Bay	46
South End	288
Roxbury	281
West Roxbury	6
Dorchester	143
South Boston	86
East Boston	112
Charlestown	62
Jamaica Plain	39
Brighton	60
Roslindale	4
Hyde Park	10
Suburban towns	5
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Total number of trips	1,223
Carried extra	106
Patients rejected	5
Patients self-rejected	33
<hr/>	
Total patients carried	<u>1,291</u>

SANATORIUM DIVISION.

PRINCIPAL STATISTICS FOR THE YEAR.

Number of patients remaining in Sanatorium January 1, 1928	371
Admitted from January 1, 1928, to December 31, 1928, inclusive	336
	<hr/>
Treated during the year	707
Discharged during the year 200	
Died during the year 170	
	<hr/>
	370
	<hr/>
Number of patients remaining December 31, 1928	337
Maximum number of patients at any one time	374
Minimum number of patients at any one time	316
Daily average number of patients	347.5
Average number of days' stay of patients	248
Number of days' treatment given patients	127,165
Number of weeks' treatment given patients	18,166
Rate of mortality (per cent.)	24
Number of patients admitted over fifteen years of age	334
Total expenditures, January 1, 1928, to December 31, 1928, inclusive	\$380,882 70
Cost per patient per day, exclusive of extraor- dinary expenditures	\$2.90
Net cost per patient per day, exclusive of ex- traordinary expenditures	\$2.26
Cost of uncooked food per day	\$0.61

SANATORIUM DIVISION.

The outline worked out by the Trustees and Doctor Dowling in 1927 for the betterment of conditions generally at the Sanatorium has proved most successful.

An appropriation of \$1,400,000 has been granted for new buildings and additions and equipment and furniture.

The new Nurses' Home, also the Women's and the Men's Open-Air Ward Buildings will be completed in the summer of 1929. The Admission Building, the Patients' Recreation Building, the Dining Room and the Garage will be built as soon as possible.

New awnings, furniture for the Trustees' Room, for the Resident's House, and for the Day Camp, new kitchen furnishings, food trucks and a new bath room are among the improvements made during the year.

Much has been done to make the wards more attractive, and expenditures from the income of a trust fund for the purchase of plants, flowers and good literature has aided much in this respect.

Perhaps one of the most helpful changes has taken place in the Dietary Department. In 1928, with a larger appropriation for food, additional modern equipment for serving and heating it and the employment of a trained chef, we have been able to please our many patients with a menu which allows a choice of foods served in a palatable manner. As a result the patients are satisfied and are willing to remain at the Sanatorium for a longer period of time.

The housing of employees during 1928 proved at times a difficult problem, but the Trustees and Superintendent have made provisions on the plans for new buildings for a Nurses' Home, and with the completion of same in 1929 there will be adequate housing room for all employees in the Sanatorium Group, and this will no doubt do away with the renting of outside property for the housing of laundresses.

There has been a shortage of female beds during the past year. This acute situation will be remedied early in 1929.

Many individuals and organizations have donated flowers, books, and entertainments during the year. This was very much appreciated.

Many more entertainments will be given when a suitable auditorium is added to the Sanatorium Group.

The medical routine of the Sanatorium has continued

this year without material change. It has been possible, as seldom at any previous time, to keep the corps of resident physicians constantly filled. This has aided in keeping up the high standard of medical work.

Under rules recently made by the Trustees it has been made possible to bring about a long desired and much needed improvement in discipline among the patients.

Surgical Service.

The work of the Surgical Department during recent months has been much less, due to the change in policy at the Sanatorium which requires that serious surgical cases be sent to the Main Hospital for treatment. Minor surgery is still done here.

The transfer of heliotherapy cases to the State Sanatorium at Lakeville has completely relieved the surgical service of all cases of this type.

This year marks the twentieth anniversary of the establishment of the surgical service and suggests a brief review of its activities. In the early days of the hospital, when the surgical equipment was most primitive, some truly pioneer work was done, such as operations under gas-oxygen anesthesia, and major operations under local anesthesia. This was one of the first hospitals in the country to use spinal anesthesia.

It is pleasant to recall that in earlier years some basic intrathoracic surgery was done in the Sanatorium. The first cases of lung surgery under positive pressure to be done in human beings in New England were those reported from this institution. The apparatus devised on the service for this purpose has, with some modifications, remained as the most acceptable. In these early days, notwithstanding the fact that we were dealing with poor risks and doing the work with very inexperienced assistants we cannot recall a single surgical calamity.

A very unusual if not unique opportunity exists at the Sanatorium for working out of certain surgical problems associated with tuberculosis in various forms.

Laryngological Service.

As in years past, there has been a marked increase in the number of cases of pathological conditions of the nose, throat and ear presenting themselves for treatment.

There have been twenty-one cases of laryngeal tuberculosis under treatment with the number of treatments varying from one to eighteen. These cases have been treated by galvano-cautery or the instillation of 10 per cent emulsion of chaulmoogra oil, resection of the laryngeal nerve, or blocking of the internal branch of the superior nerve. Two cases became inactive but the remainder continued to show activity. At the present time there are seven cases under observation.

During the past year the number of treatments given, both in the wards and throat room, was 541. This number includes the cases of laryngeal tuberculosis previously noted. Among the cases under treatment were sinusitis, acute and chronic, deviated septum, rhinitis, acute and chronic, hypertrophied turbinates, tonsillitis, acute and chronic, septic sore throat, tonsillar abscess, tubercular stomatitis (arrested), otitis media, acute and chronic, and tuberculosis of the middle ear.

Dental Service.

The work of the dental department at the Sanatorium has progressed with very little change during the past year. The only difference in our figures is an increase in the number of cases of extraction and acute alveolar abscesses presented for treatment.

With the transfer of children to other institutions the number of fillings and prophylaxes has declined, and the time ordinarily given to this kind of work has been necessarily devoted to the increased number of emergency cases among the adults.

X-Ray Service.

During the year 1928, twelve hundred and ninety-three house cases were examined by the Sanatorium

X-Ray Department. This included serial films of chest, bone and joint cases, as well as gastro-intestinal examinations.

There has been a better spirit among the Assistant Resident Medical Officers than heretofore, manifested by the desire of all to be present during the X-ray readings. This is not only helpful to the Visiting Roentgenologist, but to the house man as well.

Ten hundred and ninety treatments were given with the air-cooled quartz lamp.

The plans for the additional hospital buildings fortunately comprise admirable provisions for two solaria which are to be especially equipped for the administration of artificial sunlight.

Occupational Therapy Service.

Occupational therapy work has been continued by the two aides in the shop and on the wards during the last twelve months, with more advanced problems but a smaller group of patients, due chiefly to the fact of the reduced number of discharges from the institution of the patients included in this department. During the previous year, fifty were lost from the department through discharge, in comparison to only eighteen this year. Of this number, nearly all were able to return to outside labors again.

Entire enrollment	120
Prior to 1928	74
New members	46
Entered Sanatorium employ	7
Died	12
Average number of individuals each month	60

The prescribed occupations, consisting of foot and hand loom weaving, wood carving, chair caning, basketry, wood work, leather work, bead work, sewing, embroidery, painting, block printing, knotting, etc., produced over 9,000 articles.

The disposing of the products through gift shops,

consignees, and sales, has been a greater problem this year than heretofore. This, however, has been accomplished by procuring consignees, forty-nine in number. Six sales were held in Gloucester, these being made possible through the kindness of the hotel managers; also six sales in Boston this fall. This does not include the booth, furnished us by the managers of the Boston Food Fair for one week in October. During the first week in December, the annual exhibition and sale was held in the workshop at the Sanatorium, making total receipts from sales and consignees amount to \$6,691.98. For materials, express, postage, etc., \$3,945.61 was spent; \$3,730.35 was paid to the patients. The total amount spent for the past year was \$7,675.96, leaving a balance of \$324.04 of the amount appropriated.

The call for reading material increases, the occupational therapy shop being the library center. There is certainly great need for an adequate reading room and library for the patients' use, with a librarian in charge.

In February, a valentine party was held in the shop; eighty-five patients were able to attend and to enjoy the afternoon. The Red Cross furnished a reader for the entertainment. Refreshments were served. The patients expressed the desire that this may be repeated.

There continues to be the need of an additional aide in this department.

We are very grateful for the numerous donations. We are also grateful to the many people assisting in the work, in the sale of the patients' handiwork, and in the development of occupational therapy at the Sanatorium Division.

PAVILION WARDS FOR ADULTS.

During the year a total of 619 cases, including 443 males and 176 females, were treated in these wards.

Table showing admissions and discharges:

	Males.	Females.	Totals.
Number patients January 1, 1928.....	145	82	227
Number patients admitted, from January 1, 1928, to December 31, 1928.....	298	94	392
Number patients discharged, from January 1, 1928, to December 31, 1928.....	291	95	386
Number patients December 31, 1928.....	152	81	233

Table of all admissions according to diagnosis:

	Males.	Females.	Totals.
A. Stage I.....	6	4	10
B. Stage II.....	51	16	67
C. Stage III.....	285	155	440
D. Tuberculosis, nonpulmonary.....	1	1	2
E. Nontuberculous.....	0	0	0
Totals.....	343	176	519

Table of source of all new cases:

	Males.	Females.	Totals.
A. Boston Health Department.....	225	51	276
B. Cottage Wards.....	48	10	58
C. Other institutions, etc.....	13	20	33
D. Outside Physicians.....	12	13	25
E. Born at Boston Sanatorium.....	0	0	0
Totals.....	298	94	392

Table showing disposition of all discharged cases:

	Males.	Females.	Totals.
A. Discharged dead.....	121	48	169
B. Discharged home.....	64	24	88
C. Transferred to cottage wards.....	95	17	112
D. Transferred to state hospital.....	6	3	9
E. Transferred to miscellaneous institutions.....	5	3	8
F. Transferred to children's ward.....	0	0	0
Totals.....	291	95	386

Table giving average length of stay of all discharged cases since 1910:

	Year 1911- 12. (Days.)	Year 1912- 13. (Days.)	Year 1913- 14. (Days.)	Year 1914- 15. (Days.)	Year 1915- 16. (Days.)	Year 1916- 17. (Days.)	Year 1917- 18. (Days.)	Year 1918- 19. (Days.)	Year 1919- 20. (Days.)	Year 1920- 21. (Days.)	Year 1921- 22. (Days.)	Year 1922- 23. (Days.)	Year 1923- 24. (Days.)	Year 1924- 25. (Days.)	Year 1925- 26. (Days.)	Year 1926- 27. (Days.)	Year 1927- (Days.)	Year 1928- (Days.)
A. All cases.....	40	82	85	96	122	109	111	130	110	126	128	144	130	168	199	213	215	248
B. Dead.....	36	85	87	88	133	118	135	128	137	174	185	191	165	183	227	265	210	269
C. Home.....	38	93	87	98	114	70	164	163	84	106	104	105	101	162	176	159	173	197
D. State hospitals and other institutions..	33	63	80	56	27	50	31	94	108	64	85	102	138	133	259	252	238	396

Table showing condition of all cases at the time of discharge:

	Males.	Females.	Totals.
A. Dead.....	121	48	169
B. Arrested.....	7	6	13
C. Improved.....	131	33	164
D. Unimproved.....	32	8	40
Totals.....	291	95	386

COTTAGE WARDS.

The patients treated in these wards during the year numbered 211, comprising 180 males and 31 females.

Tables of admissions and discharges during the year:

	Males.	Females.	Totals.
Number of patients January 1, 1928.....	85	14	99
Number of patients admitted January 1, 1928, to December 31, 1928.....	95	17	112
Number of patients discharged, from January 1, 1928, to December 31, 1928.....	93	17	110
Number patients remaining December 31, 1928....	87	14	101

Table giving diagnosis at entrance of all cases admitted:

	Males.	Females.	Totals.
A. Stage I.....	5	4	9
B. Stage II.....	16	6	22
C. Stage III.....	74	7	81
Totals.....	95	17	112

Table of disposition of all discharged cases:

	Males.	Females.	Totals.
A. Home.....	41	6	47
B. Pavilion hospital.....	48	10	58
C. Other institutions.....	4	1	5
Totals.....	93	17	110

Table giving length of stay of all discharged cases:

	Males.	Females.
All discharged cases.....	330 days.	251 days.
Those discharged home.....	181 days.	426 days.
Those discharged to pavilion wards.....	453 days.	197 days.
Those discharged to other institutions.....	386 days.	63 days.

Table showing condition of patients at discharge:

	Males.	Females.	Totals.
Arrested.....	11	5	16
Improved.....	34	2	36
Unimproved.....	48	10	58
Totals.....	93	17	110

CHILDREN'S WARD.

During the year a total of 47 infants and children, including both sexes, were treated in this ward.

Table of admissions and discharges:

	Males.	Females.	Totals.
Number patients enrolled January 1, 1928.....	22	23	45
Number patients admitted during the year.....	1	1	2
Number patients discharged during the year.....	22	22	44
Number patients remaining December 31, 1928....	1	2	3

Table showing sources of all cases admitted:

	Males.	Females.	Totals.
A. Boston Health Department.....	1	1	2
B. Pavilion wards.....	0	0	0
C. Other institutions.....	0	0	0
D. Private physicians.....	0	0	0
Totals.....	1	1	2

Table of diagnosis at entrance of all cases admitted during the year:

	Males.	Females.	Totals.
A. Stage I.....	1	1	2
B. Stage II.....	0	0	0
C. Stage III.....	0	0	0
D. Tuberculosis, nonpulmonary.....	0	0	0
E. Nontuberculous.....	0	0	0
Totals.....	1	1	2

Table of disposition of all cases discharged during the year:

	Males.	Females.	Totals.
A. Dead.....	0	1	1
B. Home.....	18	18	36
C. Other institutions.....	4	3	7
Totals.....	22	22	44

Table of average length of stay of all discharged cases:

	Males.	Females.
A. All cases.....	618 days.	984 days.
B. Dead.....	— days.	298 days.
C. Home.....	607 days.	943 days.
D. Other Institutions.....	667 days.	1,131 days.

Table showing losses and gains in weight of all discharged cases:

	Males.	Females.	Totals.
A. Stationary.....	0	1	1
B. Gained.....	20	18	38
C. Lost.....	2	2	4
D. Unknown (dead).....	0	1	1
Totals.....	22	22	44

Table giving condition of all cases at time of discharge:

	Males.	Females.	Totals.
A. Dead.....	0	1	1
B. Arrested.....	16	15	31
C. Improved.....	4	3	7
D. Unimproved.....	2	2	4
E. Nontuberculous.....	0	1	1
Totals.....	22	22	44

Table No.1.
DISBURSEMENTS ACCORDING TO VARIOUS SUBDIVISIONS.

	Hospital Proper.	Out-Patient Department.	Pathological Laboratory.	Thorndike Laboratory.	X-Ray and Photo- graphic Depart- ment.	Depart- ment for Physical Thera- peutics.	Depart- ment of Immunology.	Clinical Laboratory.	Blood Laboratory.	Depart- ment of Oral Surgery.	Depart- ment of Social Work.	Settlement Account.	South Department.	Haymarket Square Relief Station.	East Boston Relief Station.	Conva- lescent Home.	West Depart- ment.	Totals.	Sanatorium Division.
Subsistence supplies.....	\$356,180 27												\$65,517 51	\$15,807 60	\$3,864 32	\$4,177 11		\$445,546 81	\$104,797 94
Fuel.....	68,839 93	\$10,637 27	\$3,545 80	\$3,545 81	\$3,545 77								29,799 25	1,871 99	936 57	1,564 01	\$808 00	125,094 40	16,667 76
Medical supplies.....	135,067 37	8,379 99	4,701 79	7,215 84	30,672 79	\$3,051 81	\$599 75	\$4,873 33	\$95 83	\$186 63			7,688 15	6,196 84	1,628 67	244 03		210,602 82	12,998 66
Salaries and labor.....	670,214 81	75,101 13	33,330 87	50,903 43	30,048 46	16,955 06	4,876 23	4,751 33	2,254 40	1,291 98	\$20,282 65	\$1,218 73	157,523 95	50,072 86	27,344 36	10,130 38	3,722 42	1,160,023 05	183,664 04
Buildings, repairs.....	29,690 70	1,142 08	600 65	2,523 28	217 72								3,950 21	1,485 44	487 15	150 88	458 09	40,706 20	12,669 58
Grounds.....	1,436 88												398 72	11 61	93 00	312 17		2,252 38	455 16
Ice.....	6,806 40												942 99	432 79	287 43	397 08		8,866 69	
Electric lighting power and gas.....	9,100 31	139 97	310 91	825 23	340 41	134 95							1,178 96	2,661 14	727 61	483 64	105 28	16,008 41	10,960 46
Soap, cleansing stuffs, matches, etc.....	13,104 36	343 51	307 96	5 84	8 84	11 03	5 37						3,014 98	316 04	38 29	57 25		17,213 47	1,863 51
Furniture, furnishings and fixtures.....	37,244 33	1,466 80	773 92	1,728 13	563 61	195 27	12 51	2 94	2 45	3 70	103 11	11 30	4,936 38	936 89	376 20	688 87	149 98	49,196 39	11,539 68
Beds and bedding.....	10,584 00	182 44	1 61	13 50	56 91	64 83							4,238 81	705 44	254 92	197 74		16,300 20	6,387 59
Dry goods, uniforms and clothing.....	16,934 05	113 10	129 37	403 99	233 94	5 84			11 00				4,760 58	556 47	137 97	131 32		23,417 63	1,732 57
Stationery, printing, postage and advertising.....	10,802 97	1,608 06	290 12	588 45	443 83	30 35	11 37				436 25	640 36	688 16	355 25	270 35	14 04		16,179 56	2,200 60
Transportation, cartage and freight.....	647 75	6 95	15 21	9 88	26 18						537 50		5 00	250 00	105 00	40 00		1,643 47	585 69
Telephones and telegraphs.....	4,583 03	551 52	50 14	100 28	100 27	50 14		25 07			758 28	100 27	2,791 56	697 17	173 54	81 67	9 40	10,072 34	1,118 59
Laundry, repairs, etc.....	11,216 24	176 68	58 90	58 89	58 89								3,673 30	72 94	70 67	36 42		15,422 93	1,316 08
Garage and ambulance: General supplies.....	5,640 55												1,044 01	569 88	4,025 02	76 77		11,356 23	1,016 98
Animals and their maintenance.....			598 41	972 30														1,570 71	709 79
Training School for Nurses, including Nurses' Home:																			
General supplies, medical supplies and building repairs.....	4,875 85	182 84											792 33	121 91	121 88			6,094 81	
Annual reports.....	341 11												43 86	34 11	34 11	34 11		487 30	
Medical library.....	1,166 49																	1,166 49	103 88
Loose leaf records: General expenses.....	2,977 01	1,192 25											344 55					4,513 81	
Incidentals.....	1,313 45		13 17	565 79														1,892 41	778 18
Occupational therapy.....																			7,675 96
Rentals.....																			960 00
Window washing.....																			680 00
Totals.....	\$1,398,767 86	\$101,224 59	\$44,728 83	\$69,460 64	\$66,317 62	\$20,499 28	\$5,505 23	\$9,652 67	\$2,363 68	\$1,482 31	\$22,117 79	\$1,970 66	\$293,333 26	\$83,156 37	\$40,977 06	\$18,817 49	\$5,253 17	\$2,185,628 51	\$380,882 70
Adjustments:																			
(A) Pathological Laboratory.....	86% 38,466 80	4% 1,789 15											10% 4,472 88						
(B) Thorndike Memorial.....	100% 69,460 64																		
(C) X-Ray and Photographic Department.....	46% 30,506 11	54% 35,811 51																	
(D) Department of Physical Therapeutics.....	12% 2,459 91	88% 18,039 37																	
(E) Department of Immunology.....	2% 110 10	98% 5,395 13																	
(F) Clinical Laboratory.....	66% 6,370 76	34% 3,281 91																	
(G) Blood Laboratory.....	68% 1,370 93	42% 992 75																	
(H) Department of Oral Surgery.....	27% 400 22	73% 1,082 09																	
(I) Department of Social Work.....	50% 11,058 90	50% 11,058 89																	
(J) Settlement Account.....	93% 1,832 71												7% 137 95						
Totals.....	\$1,560,804 94	\$178,675 39											\$297,944 09	\$83,156 37	\$40,977 06	\$18,817 49	\$5,253 17	\$2,185,628 51	\$380,882 70
Charged from hospital on account of board of employees:																			
Out-Patient Department.....	\$14,129 15	+ 14,129 15																	
Haymarket Square Relief Station.....	1,529 72													+ 1,529 72					
East Boston Relief Station.....	1,529 72														+ 1,529 72				
Convalescent Home.....	836 57															+ 836 57			
	—18,025 16																		
Total operating expenses.....	\$1,542,779 78	\$192,804 54											\$297,944 09	\$84,686 09	\$42,506 78	\$19,654 06	\$5,253 17	\$2,185,628 51	\$380,882 70
Deduct for permanent improvements and extraordinary expenditures.....	5,667 73	594 85											3,014 26	40 31	40 31			9,357 46	7,164 05
	\$1,537,112 05	\$192,209 69											\$294,929 83	\$84,645 78	\$42,466 47	\$19,654 06	\$5,253 17	\$2,176,271 05	\$373,718 65
Deduct increase in stock on hand more than January 1, 1927.....		255 00											675 00	474 00		152 00	112 00	1,668 00	4,852 12
Add decrease in stock on hand less than January 1, 1927.....	9,292 00														38 00			9,330 00	
Amount properly chargeable to maintenance.....	\$1,546,404 05	\$191,954 69											\$294,254 83	\$84,171 78	\$42,504 47	\$19,502 06	\$5,141 17	\$2,183,933 05	\$368,866 53
Cost per day per ward patient.....	4 51												4 90	4 57	4 57	3 66			2 90
Cost per visit per out-patient.....		66												2 70	1 92				

SANATORIUM DIVISION.

Table No. 2.

EXPENDITURES IN ACCORDANCE WITH THE UNIFORM
SYSTEM OF HOSPITAL ACCOUNTING.

PARTICULARS.	Expenditures, Salaries and Expenses.	Totals.	Grand Totals.
Administration:			
Salaries.....		\$16,465 76	
Expenses.....		3,895 38	
			\$20,361 14
PROFESSIONAL CARE OF PATIENTS.			
Physicians:			
Salaries.....		\$14,364 78	
Superintendent of Nurses:			
Salaries.....		1,704 66	
Head Nurses:			
Salaries.....		10,685 73	
Nurses:			
Salaries.....		27,783 56	
Male Nurses:			
Salaries.....		6,322 78	
Ward Maids:			
Salaries.....		1,516 98	
Druggist:			
Salaries.....		1,203 78	
Medical and Surgical Supplies:			
Expenses.....		10,321 27	
Supervisor:			
Salaries.....		1,253 29	
Orderlies:			
Salaries.....		1,226 19	
X-Ray and Photographic Department:			
Salaries.....	\$2,205 93		
Expenses.....	2,371 78		
		4,577 71	
Pathological Laboratory:			
Salaries.....	\$2,525 14		
Expenses.....	305 61		
		2,830 75	
Department of Social Service:			
Salaries.....		2,983 22	
Surgical Assistant:			
Salaries.....		601 81	
Laryngologist:			
Salaries.....		1,203 09	
Religious Service:			
Salaries.....		3,058 36	
Occupational Therapy:			
Salaries.....	\$2,757 53		
Expenses.....	7,675 96		
		10,433 49	
			102,071 45
DEPARTMENT EXPENSES.			
Ambulance:			
Salaries.....	\$1,760 14		
Expenses.....	1,016 98		
		\$2,777 12	
Carried forward.....		\$2,777 12	\$122,432 59

EXPENDITURES IN ACCORDANCE WITH THE UNIFORM SYSTEM OF HOSPITAL
ACCOUNTING.—*Concluded.*

PARTICULARS.	Expenditures, Salaries and Expenses.	Totals.	Grand Totals.
<i>Brought forward</i>		\$2,777 12	\$122,432 59
Housekeeping:			
Salaries.....	\$27,044 74		
Expenses.....	22,203 35	49,248 09	
Steward's Department:			
Salaries.....	\$6,212 03		
Expenses.....	104,797 94	111,009 97	
Kitchen:			
Salaries.....		6,334 25	
Laundry:			
Salaries.....	\$9,509 47		
Expenses.....	1,316 08	10,825 55	
Heat, Light and Power:			
Salaries.....	\$22,671 56		
Expenses.....	10,960 46	33,632 02	213,827 00
BUILDINGS AND GROUNDS.			
Buildings:			
Salaries.....	\$2,479 76		
Expenses.....	29,346 84	\$31,826 60	
Grounds:			
Salaries.....	\$9,789 50		
Expenses.....	1,164 95	10,954 45	42,781 05
Miscellaneous:			
Expenses.....			1,842 06
Total.....			\$380,882 70
Total operating expenses.....			\$380,882 70
Deduct for permanent improvements and extra-ordinary expenditures.....			7,164 05
Net total operating expenses.....			\$373,718 65
Deduct difference in stock on hand more than January 1, 1928.....			4,852 12
Amount properly chargeable to maintenance...			368,866 53
Total patients' days' treatment.....	127,165		
Cost per patient per day.....			\$2 90

Table No. 3.

EXPENDITURES, CLASSIFIED IN ACCORDANCE WITH SEGREGATED
BUDGET FOR THE YEAR 1928.

GROUP AND ITEM.	ALL DEPARTMENTS EXCEPT SANATORIUM DIVISION.		SANATORIUM DIVISION.	
	1928.		1928.	
A. PERSONAL SERVICE.....		\$1,149,994 68		\$182,405 54
Permanent employees.....	\$1,084,916 40		\$179,134 31	
Temporary employees.....	53,919 37		2,437 46	
Unassigned.....	11,158 91		833 77	
B. SERVICE OTHER THAN PERSONAL.....		91,205 09		27,528 59
Printing and binding.....	\$1,502 50			
Advertising and posting.....	22 75		\$9 50	
Transportation of persons.....	1,274 23		273 67	
Cartage and freight.....	371 32		312 02	
Light, heat and power.....	8,272 66		8,989 10	
Rent, taxes and water.....			960 00	
Premium on surety bond.....	95 50		18 00	
Communication.....	10,072 34		1,118 59	
Motor vehicle repairs.....	4,129 86		420 81	
Motorless vehicle repairs.....	1,337 31		59 15	
Care of animals.....			126 50	
Cleaning.....	29 59		680 00	
Removal of snow.....	866 61			
Expert and architect.....	802 41			
Fees, service of venires.....	146 00		47 00	
Music, concerts, etc.....			600 00	
General plant.....	62,282 01		13,914 25	
C. EQUIPMENT.....		118,789 92		16,955 38
Machinery.....	\$365 15			
Electrical.....	1,176 31		\$354 80	
Motor vehicles.....	4,057 66		386 73	
Motorless vehicles.....	523 75		2,221 50	
Stable.....			35 00	
Furniture and fittings.....	33,290 41		10,050 12	
Educational and recreational.....			45 55	
Office.....	607 48		170 05	
Library.....	760 39		74 88	
Carried forward.....	\$40,781 15	\$1,359,989 69	\$13,338 63	\$226,889 51

EXPENDITURES, CLASSIFIED, IN ACCORDANCE WITH SEGREGATED BUDGET FOR THE YEAR 1928.—*Concluded.*

GROUP AND ITEM.	ALL DEPARTMENTS EXCEPT SANATORIUM DIVISION.		SANATORIUM DIVISION.	
	1928.		1928.	
<i>Carried forward</i>	\$40,781 15	\$1,359,989 69	\$13,338 63	\$226,889 51
Medical, surgical, laboratory.....	49,445 96	.....	2,358 75	
Tools and instruments.....	7,654 46	.....	593 73	
Wearing apparel.....	20,908 35	.....	664 27	
D. SUPPLIES.....		784,783 84		141,313 63
Office.....	\$21,222 93	.....	\$2,226 10	
Food and ice.....	454,314 95	.....	104,797 94	
Fuel.....	125,108 95	.....	17,934 82	
Forage and animal.....	738 10	.....	595 59	
Medical, surgical, laboratory.....	149,706 96	.....	11,385 32	
Laundry, cleaning and toilet.....	16,789 18	.....	2,672 15	
Educational and recreational.....	591 00	.....	69 90	
Agricultural.....	491 20	.....	184 78	
Motor vehicles.....	1,923 41	.....	291 91	
Chemicals and disinfectants.....	3,136 41	.....	203 26	
General plant.....	10,760 75	.....	951 86	
E. MATERIALS.....		30,676 61		3,745 10
Buildings.....	\$17,270 68	.....	\$2,202 76	
Machinery.....	3,652 36	.....	504 53	
Electrical.....	5,781 13	.....	626 75	
General plant.....	3,972 44	.....	411 06	
F. SPECIAL ITEMS.....		10,178 37		8,934 46
Pensions and annuities.....	2,797 29	.....	\$1,017 25	
Workingmen's compensation.....	7,231 08	.....	241 25	
Industries.....		.....	7,675 96	
Special investigation.....	150 00	.....	
Total expenditures.....		\$2,185,628 51		\$380,882 70

Table No. 4.

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928, INCLUSIVE.

ARTICLES.	Quantity.	Average Price.	Cost.
THE MAIN HOSPITAL, SOUTH DEPARTMENT, HAYMARKET SQUARE RELIEF STATION, EAST BOSTON RELIEF STATION, CONVALESCENT HOME AND WEST DEPARTMENT.			
Beef and veal.....	197,013 lbs.	\$0.311 per lb.	\$61,342 41
Mutton and lamb.....	84,510 "	.286 "	24,133 78
Poultry.....	104,093 "	.381 "	39,610 93
Pork and hams.....	163,391 "	.268 "	43,778 25
Fish.....			11,572 11
Lard.....	9,739 lbs.	.15 per lb.	1,464 56
Milk.....	627,366 qts.	.114 per qt.	71,832 51
Butter.....	73,679 lbs.	.457 per lb.	33,661 12
Cheese.....	6,497 "	.307 "	1,997 32
Eggs.....	84,815 doz.	.479 per doz.	40,615 95
Vegetables, fresh.....			33,281 99
Vegetables, canned.....			9,047 27
Fruit, fresh.....			19,145 27
Fruit, canned.....			13,511 84
Flour.....	1,020½ bbls.	6.93 per bbl.	7,072 61
Graham flour.....	16 "	6.605 "	105.68
Oatmeal.....	47½ "	7.365 "	349 84
Cornstarch and farina.....	1,440 lbs.	.078 per lb.	111 60
Rice.....	10,097 "	.051 "	513 41
Other cereals.....			5,043 16
Groceries.....			8,220 98
Coffee.....	21,800 lbs.	.348 per lb.	7,588 68
Tea.....	7,896 "	.466 "	3,682 24
Chocolate and cocoa.....	1,988 "	.149 "	296 47
Sugar.....	130,432 "	.056 "	7,354 84
Molasses and syrup.....	367½ gals.	.576 per gal.	211 99
Carried forward.....			\$445,546 81

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.—Cont.

ARTICLES.	Cost.	Total.
<i>Brought forward</i>		\$445,546 81
<i>General Supplies.</i>		
Printing.....	\$6,110 59	
Stationery.....	5,013 08	
Postage.....	984 35	
Advertising proposals, etc.....	22 75	
Telephone rentals.....	6,829 76	
Telephone, telegraph and messenger service.....	1,506 61	
Nurses' Home:		
General supplies..... \$2,051 30		
Buildings..... 3,068 43		
Wages, house cleaning..... 2,012 35		
	7,132 08	
Training School for Nurses:		
General supplies..... \$745 84		
Medical supplies..... 46 40		
	792 24	
Garage and ambulance:		
Expenses..... \$9,026 30		
Fuel oil, 9,918.35 gallons at \$0.041 per gallon 404 22		
	9,430 52	
Garage supplies.....	725 66	
Gasoline.....	1,604 27	
Soap and cleansing stuffs.....	15,750 54	
Dry goods.....	5,087 48	
Furniture.....	5,861 24	
Furnishings.....	32,781 91	
Fixtures.....	5,322 17	
Bedsteads.....	1,292 10	
Mattresses.....	2,421 21	
Bedding.....	12,267 60	
Laundry supplies:		
Expenses..... \$15,069 57		
Fuel oil, 342,677 gallons at \$0.041 per gallon 13,965 59		
	29,035 16	
Gas, 4,239,900 cubic feet at \$1.171 per 1,000 cubic feet.....	4,965 97	
Electric light purchased.....	2,263 86	
Electric light system.....	5,634 14	
Electric appliances.....	1,392 97	
Kerosene, matches and candles.....	114 59	
<i>Carried forward</i>	\$164,342 85	\$445,546 81

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.— *Cont.*

ARTICLES.	Cost.	Total.
<i>Brought forward</i>	\$164,342 85	\$445,546 81
<i>General Supplies.— Concluded.</i>		
Ice, 1,531 $\frac{800}{2000}$ tons at \$5.79 per ton.....	8,866 69	
Transportation and express.....	731 73	
Cartage and freight.....	316 02	
Insurance.....	95 50	
Clothing for patients.....	12,034 93	
Uniforms, caps, etc.....	5,397 98	
Annual reports.....	487 30	
Medical library.....	1,166 49	
Clinical records:		
Expenses..... \$3,321 56		
Salaries..... 12,720 89		
	16,042 45	
House cleaning:		
Soap..... \$665 79		
Brushes, etc..... 367 33		
	1,033 12	
Incidentals not otherwise classified.....	1,217 95	
		211,733 01
<i>Medical Supplies.</i>		
Surgical appliances.....	\$18,825 29	
Splints and crutches.....	1,678 82	
Surgical instruments.....	23,057 72	
X-ray apparatus.....	18 55	
X-ray supplies.....	1,215 32	
Druggists' sundries.....	6,358 65	
Surgical dressings.....	3,533 23	
Bandage and compress materials.....	6,200 71	
Gauze.....	25,039 47	
Absorbent cotton.....	3,438 76	
Medicinal gases.....	7,813 33	
Sulphuric ether.....	3,594 95	
Medicine and drugs.....	39,949 19	
Flaxseed meal.....	1,219 84	
Alcohol.....	5,227 27	
Liquors.....	1,393 33	
Malt liquors and mineral waters.....	2,164 45	
Special investigation.....	96 18	
		150,825 06
<i>Carried forward</i>		\$808,104 88

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.— *Cont.*

ARTICLES.	Cost.	Total.
<i>Brought forward</i>		\$803,104 88
<i>Fuel.</i>		
Coal, 843 $\frac{1373}{100}$ tons at \$7.609 per ton.....	\$6,420 55	
Oil, 2,025,494.41 gallons at \$0.041 per gallon.....	82,547 79	
Charcoal.....	260 00	
Wood.....	141 10	
Coke.....	80 50	89,449 94
<i>Salaries and Labor.</i>		
Salaries and wages.....	\$7,204 17	
Pay rolls.....	859,079 49	
Wages, house cleaners.....	27,963 51	
Pensions.....	2,797 29	
Injured employees.....	7,231 08	904,275 54
<i>Buildings.</i>		
General repairs.....	\$20,110 98	
Boilers and heating apparatus.....	7,363 47	
Painting.....	4,621 81	
Plumbing.....	2,005 87	
Refrigerating plant.....	1,755 58	
Walls and fences.....	364 76	36,222 47
<i>Grounds.</i>		
Care of grounds.....		2,252 38
		\$1,840,305 21
Deduct for board of employees:		
Out-Patient Department.....		14,129 15
Total expenditures for maintaining Main Departments for year ending December 31, 1928.....		\$1,826,176 06
OUT-PATIENT DEPARTMENT.		
<i>General Supplies.</i>		
Printing, stationery and postage.....	\$1,608 06	
Telephone rentals.....	551 52	
Training School for Nurses:		
Training School for Nurses, Nurses' Homes:		
General supplies.....	\$86 50	
Medical supplies.....	1 44	
Buildings.....	94 90	
Wages, house cleaning.....	62 24	
	245 08	
<i>Carried forward</i>	\$2,404 66	\$1,826,176 06

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.— *Cont.*

ARTICLES.	Cost.	Cost.	Total.
<i>Brought forward</i>	\$2,404 66	.....	\$1,826,176 06
OUT-PATIENT DEPARTMENT.— <i>Concluded.</i>			
<i>General Supplies.— Concluded.</i>			
Soap and cleansing stuffs.....	132 27		
Dry goods, uniforms and clothing for patients.....	113 10		
Furniture, furnishings and fixtures.....	1,381 53		
Bedding.....	182 44		
Laundry supplies.....	176 68		
Gas, 45,400 cubic feet at \$1.18 per 1,000 cubic feet.....	53 58		
Electric light system.....	51 14		
Electrical appliances.....	35 25		
Kerosene, matches, and candles, etc.....	62		
Transportation, cartage and freight.....	6 95		
Clinical records and cataloguing:			
Printing..... \$1,192 25			
Salaries..... 19,780 22			
	20,972 47		
House cleaning: Soap, \$210.62, brushes, etc., \$85.27.....	295 89		
		\$25,806 58	
<i>Medical Supplies.</i>			
Surgical instruments and appliances.....	\$1,730 56		
Splints and crutches, drug sundries and laboratory ware.....	425 55		
Dressings, gauze, bandage and absorbent cotton.....	2,439 03		
Medicinal gases, ether, alcohol, drugs.....	3,784 85		
		8,379 99	
<i>Fuel.</i>			
Oil, 261,010.9 gallons at \$0.041 per gallon.....		10,637 27	
<i>Salaries and Labor.</i>			
Salaries and wages.....	\$151 67		
Pay rolls.....	48,562 02		
Wages, house cleaning.....	6,544 98		
		55,258 67	
<i>Buildings.</i>			
Building repairs, heating apparatus, painting and plumbing.....		1,142 08	
		\$101,224 59	
Add for board of Out-Patient employees.....		14,129 15	
			115,353 74
<i>Carried forward</i>			\$1,941,529 80

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.—*Cont.*

ARTICLES.	Cost.	Cost.	Total.
<i>Brought forward</i>			\$1,941,529 80
PATHOLOGICAL LABORATORY.			
<i>General Supplies.</i>			
Printing and stationery.....	\$290 12		
Telephone rentals.....	50 14		
Soap and cleansing stuffs.....	293 00		
Dry goods, uniforms and caps.....	129 37		
Bedding.....	1 61		
Furniture, furnishings and fixtures.....	767 96		
Laundry.....	58 90		
Gas, 223,900 cubic feet at \$1.18 per 1,000 cubic feet.....	264 22		
Electric light system.....	15 49		
Electrical appliances.....	31 20		
Kerosene, matches and candles.....	12 10		
Cartage and freight.....	15 21		
Hay, grain and straw.....	598 41		
House cleaning: Soap, \$2.86, brushes, etc., \$5.96.....	8 82		
Incidentals not otherwise classified.....	13 17		
		\$2,549 72	
<i>Medical Supplies.</i>			
Surgical instruments, appliances and laboratory ware.....	\$2,911 60		
Micro-photographic supplies.....	74 39		
Gauze, bandage and absorbent cotton.....	95 61		
Medicinal gases, ether, alcohol, chemicals..	1,620 19		
		4,701 79	
<i>Fuel.</i>			
Oil, 87,003.64 gallons at \$0.041 per gallon.....		3,545 80	
<i>Salaries and Labor.</i>			
Salaries and wages.....	\$75 83		
Pay rolls.....	32,603 56		
Wages, house cleaning.....	651 48		
		33,330 87	
<i>Buildings.</i>			
Building repairs, heating apparatus and plumbing.....		600 65	
			44,728 83
<i>Carried forward</i>			\$1,986,258 63

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.—Cont.

ARTICLES.	Cost.	Cost.	Total.
<i>Brought forward</i>.....	.....	.....	\$1,986,258 63
THORNDIKE MEMORIAL LABORATORY.			
<i>General Supplies.</i>			
Printing, stationery and postage.....	\$588 45		
Telephone rentals.....	100 28		
Soap and cleansing stuffs.....	3 72		
Dry goods, uniforms and caps.....	403 99		
Furniture, furnishings and fixtures.....	1,724 13		
Bedding.....	13 50		
Laundry.....	58 89		
Gas, 367,200 cubic feet at \$1.157 per 1,000 cubic feet.....	425 03		
Electric light system.....	353 80		
Electrical appliances.....	46 40		
Kerosene, matches and candles.....	23		
Cartage and freight.....	9 88		
Hay, grain and straw.....	139 69		
House cleaning: Soap, \$1.89, brushes, etc., \$4.....	5 89		
Incidentals not otherwise classified.....	565 79		
		\$4,439 67	
<i>Medical Supplies.</i>			
Surgical instruments, appliances and laboratory ware.....	\$4,978 83		
Micro-photographic supplies.....	1,055 00		
Gauze, absorbent cotton and bandage and compress.....	33 39		
Chemicals, ether and alcohol.....	1,148 62		
Animals.....	832 61		
		8,048 45	
<i>Fuel.</i>			
Oil, 87,003.7 gallons at \$0.041 per gallon.....		3,545 81	
<i>Salaries and Labor.</i>			
Salaries and wages.....	\$75 83		
Pay rolls.....	50,397 73		
Wages, house cleaning.....	429 87		
		50,903 43	
<i>Building.</i>			
Building repairs, heating apparatus, and plumbing.....		2,523 28	
			69,460 64
<i>Carried forward</i>.....	.....	.....	\$2,055,719 27

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.— *Cont.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i>			\$2,055,719 27
X-RAY AND PHOTOGRAPHIC DEPARTMENT.			
<i>General Supplies.</i>			
Printing, stationery and postage.....	\$443 83		
Telephone rentals.....	100 27		
Soap and cleansing stuffs.....	7 66		
Dry goods, uniforms and clothing for patients.....	233 94		
Furniture and furnishings.....	561 11		
Bedding.....	56 91		
Laundry.....	58 89		
Electric power purchased.....	300 00		
Electric light system.....	13 38		
Electrical appliances.....	27 03		
Cartage and freight.....	26 18		
House cleaning: Soap, \$1.18: brushes, etc., \$2.50.....	3 68	\$1,832 88	
<i>Medical Supplies.</i>			
Instruments, appliances and drug sundries..	\$64 58		
X-ray and photographic apparatus.....	1,863 31		
X-ray and photographic supplies.....	27,075 29		
Dressings, gauze, absorbent cotton and bandage material.....	26 28		
Chemicals.....	1,643 33	30,672 79	
<i>Fuel.</i>			
Oil, 87,003.64 gallons at \$0.041 per gallon....		3,545 77	
<i>Salaries and Labor.</i>			
Salaries and wages.....	\$75 83		
Pay rolls.....	29,705 63		
Wages, house cleaning.....	267 00	30,048 46	
<i>Buildings.</i>			
Building repairs, heating apparatus and plumbing.....		217 72	66,317 62
<i>Carried forward</i>			\$2,122,036 89

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.— *Cont.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i>.....	.....	.....	\$2,122,036 89
DEPARTMENT OF PHYSICAL THERAPEUTICS.			
<i>General Supplies.</i>			
Printing and stationery.....	\$30 35		
Telephone rentals.....	50 14		
Soap and cleansing stuffs.....	7 23		
Dry goods and clothing for patients.....	5 84		
Furniture, furnishings and fixtures.....	193 78		
Bedding.....	64 83		
Electric light system.....	17 46		
Electrical appliances.....	117 49		
House cleaning: Soap, \$3.80; brushes, etc., \$1.49.....	5 29	\$492 41	
<i>Medical Supplies.</i>			
Instruments, appliances and laboratory ware.....	\$2,100 48		
Dressings, bandage, gauze and absorbent cotton.....	886 44		
Chemicals, ether and alcohol.....	64 89	3,051 81	
<i>Salaries and Labor.</i>			
Pay rolls.....	\$16,836 38		
Wages, house cleaning.....	118 68	16,955 06	
DEPARTMENT OF IMMUNOLOGY.			20,499 28
<i>General Supplies.</i>			
Printing and stationery.....	\$11 37		
Soap and cleansing stuffs.....	2 10		
Furnishings.....	11 30		
Kerosene, matches, candles, etc.....	15		
House cleaning: Soap, \$3.12; brushes, etc., \$1.21.....	4 33	\$29 25	
<i>Medical Supplies.</i>			
Surgical instruments, appliances, drug sundries and laboratory ware.....	\$485 97		
Bandage, gauze and absorbent cotton.....	42 78		
Chemicals and ether.....	58 18		
Serum.....	12 82	599 75	
<i>Carried forward</i>.....	.....	\$629 00	\$2,142,536 17

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.— *Cont.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i>		\$629 00	\$2,142,536 17
DEPARTMENT OF IMMUNOLOGY. — <i>Concluded.</i>			
<i>Salaries and Labor.</i>			
Pay rolls.....	\$4,779 22		
Wages, house cleaning.....	97 01	4,876 23	5,505 23
CLINICAL LABORATORY.			
<i>General Supplies.</i>			
Telephone rentals.....	\$25 07		
Furniture.....	2 94	\$28 01	
<i>Medical Supplies.</i>			
Surgical instruments, appliances, laboratory ware.....	\$899 21		
Gauze and bandage material.....	3 84		
Medicine, ether and alcohol.....	3,970 28	4,873 33	
<i>Salaries and Labor.</i>			
Pay rolls.....		4,751 33	9,652 167
BLOOD LABORATORY.			
<i>General Supplies.</i>			
Dry goods, uniforms and caps.....	\$11 00		
Furnishings and fixtures.....	2 45	\$13 45	
<i>Medical Supplies.</i>			
Surgical instruments and laboratory ware...	\$5 40		
Gauze and absorbent cotton.....	36 10		
Chemicals, ether and alcohol.....	54 33	95 83	
<i>Salaries and Labor.</i>			
Pay rolls.....		2,254 40	2,363 68
DEPARTMENT OF ORAL SURGERY.			
<i>General Supplies.</i>			
Furniture and furnishings.....		\$3 70	
<i>Medical Supplies.</i>			
Instruments, appliances and apparatus...	\$151 31		
Bandage and gauze.....	15 08		
Medicine and drugs.....	20 24	186 63	
<i>Carried forward</i>		\$190 33	\$2,160,057 17

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.— *Cont.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i>		\$190 33	\$2,160,057 75
DEPARTMENT OF ORAL SURGERY. — <i>Concluded.</i>			
<i>Salaries and Labor.</i>			
Pay rolls.....		1,291 98	1,482 31
DEPARTMENT OF SOCIAL WORK.			
<i>General Supplies.</i>			
Printing, stationery and postage.....	\$436 25		
Furniture and furnishings.....	103 11		
Telephone rentals.....	601 66		
Telephone, telegraph and messenger service,	156 62		
Transportation and express.....	537 50		
		\$1,835 14	
<i>Salaries and Labor.</i>			
Pay rolls.....		20,282 65	22,117 79
SETTLEMENT ACCOUNT.			
<i>General Supplies.</i>			
Printing, stationery and postage.....	\$640 36		
Telephone rentals.....	100 27		
Furnishings.....	11 30		
		\$751 93	
<i>Salaries and Labor.</i>			
Pay rolls.....		1,218 73	1,970 66
Total disbursements.....			\$2,185,628 51
STOCK ON HAND JANUARY 1, 1928.			
<i>All Departments.</i>			
General supplies.....		\$67,832 46	
Fuel.....		3,625 55	
Medical supplies.....		21,519 99	92,978 00
Total expenditures for all purposes.....			\$2,278,606 51
DEDUCT.			
STOCK ON HAND JANUARY 1, 1929.			
General supplies.....		\$55,267 32	
Fuel.....		2,969 55	
Medical supplies.....		27,079 13	85,316 00
Total maintenance expenses.....			\$2,193,290 51
<i>Carried forward</i>			\$2,193,290 51

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.— *Concluded.*

ARTICLES.	Cost.	Cost.	Totals.
<i>Brought forward</i>			\$2,193,290 51
DEDUCT REVENUE.			
Income from paying patients:			
Collected by hospital.....	\$179,158 75		
Collected by City Collector for contagious cases.....	22,117 97	\$201,276 72	
Revenue on account of maintenance:			
Interest on trust funds.....		2,594 96	
Sundry revenue:			
Sale of bones, trimmings and old material,		1,456 35	
Commission on automatic telephones....		495 90	
Birth fees.....		395 75	
Interest on bank deposit.....		108 22	
Rent for West Department.....		29,312 50	
Refund, Workmen's compensation		188 52	235,828 92
Net cost to the city for maintaining all departments from January 1, 1928, to December 31, 1928, inclusive.....			\$1,957,461 59

SANATORIUM DIVISION.

Table No. 4.

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.

ARTICLES.	Quantity.	Average Price.	Cost.	Total.
SUBSISTENCE SUPPLIES.				
Beef and veal.....	40,316 lbs.	\$0.368 per lb.	\$14,828 46	
Mutton and lamb.....	19,822 "	.291 "	5,771 23	
Poultry.....	30,005 "	.358 "	10,742 35	
Pork and hams.....	25,143 "	.247 "	6,220 26	
Fish.....			2,769 38	
Lard.....	275 lbs.	.15 per lb.	41 25	
Milk.....	202,829 qts.	.097 per qt.	19,728 00	
Butter.....	15,464 lbs.	.462 per lb.	7,145 06	
Cheese.....			239 74	
Eggs.....	25,620 doz.	.477 per doz.	12,212 40	
Vegetables, fresh.....			5,494 79	
Vegetables, canned.....			3,861 66	
Fruit, fresh.....			2,268 76	
Fruit, canned.....			4,123 70	
Flour.....	480 bags	3.55 per bag	1,704 03	
Flour, graham.....	10 "	3.42 "	34 20	
Oatmeal.....	2,120 lbs.	.034 per lb.	71 91	
Cornstarch and farina.....	384 "	.077 "	29 64	
Rice.....	1,500 "	.05 "	74 25	
Other cereals.....			1,867 45	
Groceries.....			2,988 17	
Coffee.....	4,400 lbs.	.346 per lb.	1,520 47	
Tea.....	821 "	.47 "	386 12	
Chocolate and cocoa.....	220 "	.13 "	28 57	
Sugar.....	9,926 "	.058 "	577 07	
Molasses and syrup.....	109½ gals.	.630 per gal.	69 02	
Carried forward.....				\$104,797 94

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.—Cont.

ARTICLES.	Cost.	Total.
<i>Brought forward</i>		\$104,797 94
<i>General Supplies.</i>		
Printing.....	\$1,139 90	
Stationery.....	732 12	
Postage.....	319 08	
Advertising proposals, etc.....	9 50	
Telephone rentals.....	1,051 82	
Telephone, telegraph, messenger service.....	66 77	
Garage and ambulance.....	653 73	
Garage supplies.....	72 34	
Gasolene.....	290 91	
Hay, straw and grain.....	595 59	
Soap and cleaning stuffs.....	1,763 83	
Dry goods.....	882 78	
Furniture.....	2,675 69	
Furnishings.....	7,965 13	
Fixtures.....	898 86	
Bedsteads.....	144 50	
Mattresses.....	2,087 54	
Bedding.....	4,155 55	
Laundry.....	1,316 08	
Gas, 1,154,600 cubic feet at \$1.097 per 1,000 cubic feet..	1,267 06	
Electric light purchased.....	8,989 10	
Electrical appliances.....	704 30	
Kerosene, matches, candles.....	99 68	
Transportation and express.....	273 67	
Cartage and freight.....	312 02	
Insurance.....	35 00	
Clothing for patients.....	828 79	
Uniforms, caps, etc.....	21 00	
Medical library.....	103 88	
Shea House.....	960 00	
Occupational Therapy Shop.....	7,675 96	
Window cleaning.....	680 00	
Care of horses.....	114 20	
Entertainments.....	600 00	
Incidentals not classified.....	143 18	
		49,629 56
<i>Carried forward</i>		\$154,427 50

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.— *Cont.*

ARTICLES.	Cost.	Total.
<i>Brought forward</i>.....	.....	\$154,427 50
<i>Medical Supplies.</i>		
Surgical appliances.....	\$897 38	
Splints and crutches.....	37 65	
Surgical instruments.....	198 89	
Laboratory apparatus.....	305 61	
Druggists' sundries.....	186 52	
Surgical dressings.....	836 08	
Bandage and compress materials.....	306 54	
Gauze.....	606 76	
Absorbent cotton.....	214 52	
Medicinal gases.....	10 20	
Medicine and drugs.....	6,805 15	
Flaxseed meal.....	12 00	
X-Ray apparatus..... \$1,058 72		
X-Ray supplies..... 1,313 06		
	2,371 78	
Alcohol.....	209 58	
		12,998 66
<i>Fuel.</i>		
Coal, 2,630 $\frac{2}{3}$ tons at \$6.337 per ton.....	.....	16,667 76
<i>Salaries and Labor.</i>		
Pay rolls.....	\$182,405 54	
Pensions.....	1,017 25	
Injured employees.....	241 25	
		183,664 04
<i>Buildings.</i>		
General repair.....	\$6,410 03	
Boilers and heating apparatus.....	1,568 64	
Painting.....	503 43	
Plumbing.....	3,453 32	
Refrigerating plant.....	734 16	
		12,669 58
<i>Grounds.</i>		
Care of grounds.....	.....	455 16
Total disbursements.....	.....	\$380,882 70
<i>Carried forward</i>.....	.....	\$380,882 70

DISBURSEMENTS FROM JANUARY 1, 1928, TO DECEMBER 31, 1928,
INCLUSIVE.— *Cont.*

ARTICLES.	Cost.	Total.
<i>Brought forward</i>		\$380,882 70
STOCK ON HAND JANUARY 1, 1928.		
<i>All Departments.</i>		
General supplies.....	\$18,245 97	
Fuel.....	2,919 22	
Medical supplies.....	5,963 30	
		27,128 49
Total expenditures for all purposes.....		\$408,011 19
DEDUCT.		
STOCK ON HAND JANUARY 1, 1929.		
General supplies.....	\$23,302 74	
Fuel.....	3,945 90	
Medical supplies.....	4,731 97	
		31,980 61
Total maintenance expenses.....		\$376,030 58
DEDUCT REVENUE.		
Board of patients:		
Commonwealth of Massachusetts, subsidy.....	\$61,624 75	
State Department of Public Welfare, Division of Aid and Relief.....	12,330 00	
Board of Health, Groveland, Mass.....	96 25	
Board of patients, individuals.....	323 75	
Board of special nurses for patients.....	1 00	
Birth fees.....	1 25	
Bones and grease.....	115 35	
Junk and paper.....	99 18	
New England Telephone and Telegraph Company Commission.....	58 30	
Occupational therapy, sale of articles.....	6,691 98	
		81,341 81
Net cost to the city for maintaining the Sanatorium Division from January 1, 1928, to December 31, 1928, inclusive.....		\$294,688 77

Table No. 5.

COMPARISON OF THE CENSUS AND EXPENDITURES AT THE BOSTON CITY HOSPITAL FOR THE FISCAL YEARS ENDING JANUARY 31, 1925, ELEVEN MONTHS ENDING DECEMBER 31, 1925, AND YEARS ENDING DECEMBER 31, 1926, 1927, AND 1928.

POPULATION.	ALL DEPARTMENTS EXCEPT SANATORIUM DIVISION.				SANATORIUM DIVISION.	
	1924-25.	11 Months 1925.	1926.	1927.	1928.	1927. (9 Months.)
Number of patients at beginning of year.....	1,174	1,155	905	931	1,065	.....
Number admitted during year.....	27,366	23,796	24,855	27,088	27,249	747
Number discharged during year, including deaths.	27,380	24,046	24,818	26,954	27,321	376
Number remaining at end of year.....	1,160	905	942	1,065	993	371
						371
						336
						370
						337
DAILY AVERAGE OF DAYS' BOARD GIVEN.						
Patients.....	1,048.6	944.6	953	1,087.2	1,127.3	370.7
Officers and employees.....	746.7	806.9	815.8	885.3	948.3	114.4
House officers and special nurses.....	134.3	132.9	130.9	144.8	149.1	.5
Totals.....	1,929.6	1,884.4	1,899.7	2,117.3	2,224.7	485.6
						347.5
						121.8
						469.3

TABLE NO. 5.—COMPARISON OF THE CENSUS AND EXPENDITURES FOR THE YEARS 1924-1928.—*Concluded.*

POPULATION.	ALL DEPARTMENTS EXCEPT SANATORIUM DIVISION.					SANATORIUM DIVISION.	
	1924-25.	11 Months. 1925.	1926.	1927.	1928.	1927. (9 Months.)	1928.
EXPENDITURES.							
Ordinary expenditures:							
Personal service.....	\$837,251 86	\$849,124 52	\$996,022 51	\$1,083,918 94	\$1,149,994 68	\$133,577 18	\$182,405 54
Service other than personal.....	61,998 42	66,759 49	69,627 23	69,640 90	82,380 63	16,380 51	20,364 54
Equipment.....	136,620 39	104,967 67	112,783 49	107,373 18	118,256 92	9,679 25	16,955 38
Supplies.....	597,413 15	577,263 85	668,096 85	712,680 09	784,783 84	103,888 64	141,313 63
Materials.....	34,975 80	33,530 60	30,831 94	29,623 00	30,676 61	3,306 92	3,601 92
Special items.....	4,183 20	7,859 98	6,174 45	7,597 70	10,178 37	6,320 54	8,934 46
Incidental expenditures.....	.....	.....	300 00	.....	.....	6 00	143 18
Extraordinary expenditures (permanent im- provements, etc.):							
Service other than personal.....	12,548 50	14,221 97	17,029 94	31,141 35	8,824 46	14,011 63	7,164 05
Equipment.....	1,745 72	.....	.....	6,475 00	533 00	.....	.....
Special items.....	.....	8,160 37	.....	625 00	.....	.....	.....
Totals.....	\$1,686,737 04	\$1,661,888 45	\$1,900,866 41	\$2,049,075 16	\$2,185,628 51	\$287,170 67	\$380,882 70

PER CAPITA COSTS YEAR 1928.

	Per Visit.	Per Day.	Per Week.
Hospital proper:			
Per ward patient (after deducting cost of permanent improvements and extraordinary expenditures).....		\$4 51	\$31 55
Per person, for uncooked food supplies.....		53	3 74
Per out-patient, per visit.....	\$0 66		
South Department:			
Per patient (after deducting cost of permanent improvements).....		4 90	34 27
Per person, for uncooked food supplies.....		58	4 09
Hospital proper and South Department, together:			
Per ward patient (after deducting cost of permanent improvements and extraordinary expenditures) ..		4 57	31 96
Sanatorium Division:			
Per patient.....		2 90	20 30
Per person, for uncooked food supplies.....		61	4 27
Haymarket Square Relief Station:			
Per ward patient.....		4 57	31 96
Per out-patient, per visit.....	2 70		
East Boston Relief Station:			
Per ward patient.....		4 57	31 96
Per out-patient, per visit.....	1 92		
Convalescent Home:			
Per patient.....		3 66	25 66
All departments except Sanatorium Division:			
Per person, for uncooked food supplies.....		55	3 83

Table No. 6.
REVENUE FROM ALL SOURCES RECEIVED DURING THE YEAR 1928.

	Hospital Proper.	South Department.	Haymarket Square Relief Station.	East Boston Relief Station.	West Department.	All Departments, Except Sanatorium Division.	Totals, Except Sanatorium Division.	Grand Totals, Except Sanatorium Division.	Sanatorium Division.
Revenue, Account of Maintenance:									
Interest on Trust Funds	\$2,594 96							\$2,594 96	
Sundry Revenue:									
Income from paying patients collected by Hospital:									
For ward patients	150,427 07	\$6,944 09	\$3,061 28	\$52 43		\$5,555 53	\$166,040 40		\$74,375 75
For out-patients	11,586 35		1,408 00	126 00			13,118 35		
Received by City Collector for Contagious Cases		22,117 97					22,117 97	201,276 72	
Sale of bones and trimmings	1,234 71	141 36	37 77					1,413 84	115 35
Sale of old material	42 51							42 51	99 18
Commission on automatic telephones	424 07	42 07	29 76					495 90	58 30
Birth fees	394 25		25	1 25				395 75	1 25
Interest on bank deposit	108 22							108 22	
Rent — West Department *					\$29,312 50			29,312 50	
Refund — Workmen's compensation *	188 52							188 52	6,691 98
Occupational therapy, sale of articles									
Totals	\$167,000 66	\$29,245 49	\$4,535 06	\$179 68	\$29,312 50	\$5,555 53		\$235,828 92	\$81,341 81

* Received direct by City Collector on account of Hospital Department.

The tables of disbursements in this report show the expenditures of the Hospital Department for the year 1928. Tables No. 1 and No. 2 show the disbursements in various subdivisions with per capita costs. Table No. 2 shows the Hospital proper combined with South Department to form the main Hospital. Table No. 3 shows the expenditures according to the budget classification. Table No. 4 shows the detailed disbursements in various subdivisions. Table No. 5 is a comparison of the census and expenditures for the past five years. Table No. 6 is a statement of the revenue received from all sources during the year.

The total expenditures for the fiscal year for Hospital Department, in the various branches, excepting the Sanatorium Division, have been \$2,185,628.51. The expenditures of the Sanatorium Division have been \$380,882.70. The disbursements have been made as follows:

	All Departments, except Sanatorium Division.	Sanatorium Division.
For personal service	\$1,149,994 68	\$182,405 54
Service other than personal	91,205 09	27,528 59
Equipment	118,789 92	16,955 38
Supplies	784,783 84	141,313 63
Materials	30,676 61	3,745 10
Special items	10,178 37	8,934 46
Total	<u>\$2,185,628 51</u>	<u>\$380,882 70</u>

The Hospital proper has eleven subdivisions, the Hospital (wards) proper, Out-Patient Department, Pathological Laboratory, Thorndike Memorial, X-Ray Department, Department of Physical Therapeutics, Department of Immunology, Blood Laboratory, Clinical Laboratory, Department of Oral Surgery, Department of Social Work.

The expenditures for the South Department for infectious diseases, the Sanatorium Division, the Haymarket Square Relief Station, the East Boston Relief

Station, the Convalescent Home and the West Department are kept in separate tables.

The average weekly expenditure per ward patient in the Hospital proper was \$31.55; at South Department, \$34.27; at the main Hospital (Hospital proper and South Department combined), \$31.96; at the Sanatorium Division, \$20.30. At the Convalescent Home the average weekly expenditure per patient was \$25.66.

The expenditure per visit per out-patient at the Hospital proper was 66 cents; at the Haymarket Square Relief Station, \$2.70; at the East Boston Relief Station, \$1.92.

The expenditure per person for uncooked food supplies in all the Hospital Departments, excepting the Sanatorium Division, was \$3.83 per week or 55 cents per day. At the Sanatorium Division it was \$4.27 per week or 61 cents per day.

The total expenditures of the Hospital Department, excepting the Sanatorium Division, have been \$2,185,-628.51, but the net cost to the city for maintaining it was only \$1,957,461.59.

The total expenditures at the Sanatorium Division have been \$380,882.70, but the net cost to the city for maintaining it was only \$294,688.77.

The maximum number of patients in the Hospital proper on any one day was 1,054 as against 996 in the previous year. The minimum number was 757 in comparison with 740 for the previous year. The daily average during the year was 937.4 and the average length of stay was 10.3 days.

There have been treated in the various out-patient departments at the Hospital proper 52,610 patients. Other statistics may be found elsewhere, including the visits of out-patients, rate of mortality, work of ambulances, census of days' board for all persons, the nativity of patients admitted, and physical condition of patients when discharged.

The total number of deaths during the year was 1,815. This includes only the statistics of the Hospital proper.

Of the deaths, there occurred within

48 hours of admission	645 or 2.7 per cent
Other deaths	1,170 or 5 per cent
<hr/>	
Total	1,815 or 7.7 per cent

the rate of mortality for the year 1928.

This percentage of deaths is for the total number of patients treated in the Hospital. The deaths occurring within forty-eight hours of admission, 645, were 35 per cent of the whole number of deaths (1,815).

During the past year 23,576 patients were treated in the wards of the Hospital proper, 52,610 as out-patients; 349 at the Convalescent Home, 1,934 at the South Department; 707 at the Sanatorium Division; at the Haymarket Square Relief Station 2,626 were treated in the wards and 24,675 as out-patients, and at the East Boston Relief Station, 178 were treated in the wards and 8,341 as out-patients, making a total of 114,647 who have received the benefits of the hospital in all departments. The 349 Convalescent Home patients are not included in the total treated because they are transfers from the other hospital departments and have already been counted.

During the past year 23,304 persons applied for admission at the Hospital proper. Of this number 22,743 were admitted and 561 rejected. This number rejected was 2.4 per cent of all persons applying, and the causes or rejection appear in the table of applicants not admitted on page 113.

There were 221 self-rejected or deferred. Of these, 40 were admitted within three days and 10 were admitted later. There were 102 denied admission because they had a state settlement, but of these 16 were admitted within three days and 16 were admitted later. Three hundred fifty-seven were rejected for lack of accommodation, but of these 10 were admitted within three days and 71 still later. Forty-two were refused admission because they did not reside within the city limits, but 4 of these were admitted within three days and 9 later.

Two were denied admission on account of lack of information that they were suitable applicants, but of these both were admitted later. Seventeen were referred to other public institutions on account of the nature of their diseases but of these 2 were admitted later.

HAYMARKET SQUARE RELIEF STATION.

The following are the principal statistics of the Haymarket Square Relief Station for the year 1928:

Number of patients remaining in Haymarket Square Relief Station December 31, 1927	17
Admitted during year 1928	2,609
<hr/>	
Treated during year	2,626
Discharged during year	2,501
Died during year	109
<hr/>	
Total discharges and deaths	2,610
<hr/>	
Number of patients remaining in Haymarket Square Relief Station December 31, 1928	16
Number of out-patients treated during year . . .	24,675
Largest number of out-patients treated on any one day	121
Number of major surgical operations	38
Number of deaths following surgical operations . .	1
Number of deaths within twenty-four hours of admission	105
Number of days' treatment given patients in wards,	3,819
Largest number of ward patients in any one day .	19
Smallest number of ward patients in any one day .	1
Average stay of ward patients in days	1.45
Daily average in wards	10.4
Number of Relief Station ambulance calls . . .	655
Number of ambulance trips for transfer of patients to hospital proper	553
Miscellaneous ambulance trips	12
<hr/>	
	1,220
Patients carried on ambulance calls	624
Ward patients transferred to Main Hospital,	644
Out-patients transferred to Main Hospital,	87
<hr/>	
	1,355

Total number of miles run by Relief Station ambulances	6,021
Number of cases brought in by police ambulances or patrol wagons	1,526
Number of cases brought in by automobiles	1,568
Number of alcoholics admitted during year	475
Number of accident cases treated during year in Out-Patient Department and in Wards	25,031
Medical cases admitted during the year	888
Surgical cases admitted during the year	1,721
	<hr/>
Patients treated or examined by X-Ray	2,609
	<hr/>
	1,188

EAST BOSTON RELIEF STATION.

The following are the principal statistics for the year 1928:

Number of patients remaining in the East Boston Relief Station December 31, 1927	0
Admitted during year 1928	178
	<hr/>
Treated during year	178
Discharged during year	139
Died during year	39
	<hr/>
	178
	<hr/>
Number of patients remaining in East Boston Relief Station December 31, 1928	0
Number of out-patients treated:	
Medical	387
Surgical	7,954
	<hr/>
	8,341
Number of visits of out-patients:	
Medical	387
Surgical	20,992
	<hr/>
	21,379
Largest number of out-patients on any one day	79
Number of major surgical operations during year	5
Number of deaths following surgical operations	3
Number of deaths within twenty-four hours of admission	36
Number of days' treatment given patients in wards,	311
Largest number of ward patients on any one day	6
Average stay of ward patients in days	1.75

Daily average in wards	0.8
Number of ambulance trips:	
By Main Hospital ambulance (transferring patients to Main Hospital)	78
By Relief Station ambulance	185
	<hr/> 263
Patients carried in ambulances:	
By Main Hospital ambulance	64
By Relief Station ambulance	136
	<hr/> 200
Miles run by East Boston Relief Station ambulance,	610
Number of cases brought in by Police Ambulances .	255
Number of cases brought in by automobiles, etc. .	315
Number of cases receiving ward treatment although not admitted	182

CONVALESCENT HOME.

The statistics of the Convalescent Home, which has just completed its thirty-seventh year, are as follows:

Number of patients remaining in Convalescent Home	
December 31, 1927	15
Admitted during year 1928	334
	<hr/>
Total treated during year	349
Discharged during year	342
	<hr/>
Number of patients remaining December 31, 1928 .	7
Largest number of patients on any one day . .	27
Smallest number of patients on any one day . .	4
Daily average number of patients	14.5
Average length of patients' stay in days . . .	15.24
Number of days' board given patients	5,322

MEDICAL LIBRARY.

Number of books in library, January 1, 1928 . .	4,347
Number of books added to library during year 1928:	
By purchase	18
By donation	17
By binding	223
	<hr/> 258
	<hr/>
Number of books in library, December 31, 1928 .	<u>4,605</u>

There have been received during the year 186 monographs and reprints, 258 Annual Hospital and Health reports and 1,119 Periodicals.

CLINICAL RECORD ROOM.

Ward Patients.

Number of volumes indexed and prepared for binding,	343
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Cards written:

For clinical catalogue	29,872
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For name catalogue	22,743
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52,615

TRAINING SCHOOL FOR NURSES.

The Training School for nurses has now completed its fifty-first year. The changes in the nursing staff have been as follows:

SUMMARY FOR THE YEAR 1928.

January 1, 1928, the number of nurses was	322
---	-----

During the year nurses came as follows:

Night Supervisor	1
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Graduates employed for first time	4
---	---

Graduates re-employed	6
---------------------------------	---

Graduates retained	22
------------------------------	----

Graduates employed for half-time	2
--	---

Probationers came	104
-----------------------------	-----

Probationers reinstated	3
-----------------------------------	---

Pupils reinstated	2
-----------------------------	---

Male graduates employed	2
-----------------------------------	---

Male graduates re-employed	3
--------------------------------------	---

Graduate floor nurses employed (male and female)	39
---	----

Special nurses employed	4,116
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Affiliated pupils as follows:

Portsmouth Hospital	8
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Lawrence General Hospital	18
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Bath City Hospital	4
------------------------------	---

<i>Carried forward</i>	4,334	322
----------------------------------	-------	-----

<i>Brought forward</i>	4,334	322
Long Island Hospital	16	
Charlesgate Hospital	8	
Massachusetts General Hospital,	3	
Chelsea Soldiers' Home	3	
St. Margaret's Hospital	15	
Cambridge Hospital	60	
Cambridge Hospital, reinstated .	2	
Cambridge City Hospital	4	
Chelsea Memorial Hospital	6	
Worcester Memorial Hospital	13	
Quincy City Hospital	4	
New England Hospital	12	
New England Hospital, reinstated	1	
Worcester State Hospital	11	
Taunton State Hospital	3	
Danvers State Hospital	7	
Medfield State Hospital	4	
Leonard Morse Hospital	4	
Beth Israel Hospital	7	
Paine Hospital	1	
Franklin County Public Hospital	9	
Franklin County Public Hospital,		
reinstated	1	
Grafton State Hospital	1	
—	4,529	

During the year nurses left as follows:

Graduates resigned	24		
Graduate dropped for illness	1		
Graduates (half-time) resigned	2		
Pupils graduated	36		
Probationers left	21		
Probationers dropped for various			
reasons	13		
Pupils left for various reasons	8		
Pupil dropped	1		
Male graduates resigned	5		
Graduate floor nurses resigned	18		
Special nurses omitted	4,132		
<i>Carried forward</i>	4,261	4,529	322

<i>Brought forward</i> . . .	4,261	4,529	322
Affiliated pupils completed course:			
Bath City Hospital . . .	4		
Lawrence General Hospital . .	24		
Chelsea Memorial Hospital . .	6		
Long Island Hospital . . .	11		
Charlesgate Hospital . . .	10		
Massachusetts General Hospital,	5		
Chelsea Soldiers' Home . . .	2		
St. Margaret's Hospital . . .	11		
St. Margaret's Hospital, dropped,	1		
Cambridge Hospital . . .	62		
Cambridge Hospital, dropped . .	1		
Cambridge City Hospital . . .	5		
Portsmouth Hospital . . .	6		
Worcester Memorial Hospital . .	11		
Worcester Memorial Hospital,			
dropped	1		
New England Hospital. . . .	12		
New England Hospital, incom-			
plete course	1		
Worcester State Hospital . . .	3		
Taunton State Hospital . . .	2		
Taunton State Hospital, dropped,	1		
Danvers State Hospital . . .	8		
Danvers State Hospital, left			
without notice	1		
Medfield State Hospital . . .	2		
Leonard Morse Hospital . . .	4		
Leonard Morse Hospital, dropped,	1		
Beth Israel Hospital	9		
Paine Hospital	1		
Franklin County Public Hospital,	10		
Franklin County Public Hospital,			
left without notice	1		
Franklin County Public Hospital,			
dropped	2		
Grafton State Hospital . . .	1		
	—	4,480	49
Total number remaining January 1, 1929 . . .			<u>371</u>

NURSES CONNECTED WITH THE SCHOOL, JANUARY 1, 1929.

Main Hospital:

Superintendent of Nurses	1
Assistants	5
Instructors	4
Graduate nurses	36
Special nurses	41
Male graduates	5
Floor nurses, male and female	28
Pupil nurses	80
Probationers	56

Affiliated pupils as follows:

Worcester State Hospital	11
Long Island Hospital	10
Medfield State Hospital	3
Leonard Morse Hospital	3
Paine Hospital	1
Taunton State Hospital	3
Cambridge Hospital	13
Danvers State Hospital	6
St. Margaret's Hospital	3
New England Hospital	2
Chelsea Memorial Hospital	2
Bath City Hospital	2
Chelsea Soldiers' Home	1
Franklin County Public Hospital	3
Charlesgate Hospital	1

— 320

Out-Patient Department:

Supervisor	1
Graduates	7
Graduates (half time)	2
Male graduates	2

— 12

South Department:

Matron	1
Assistants	2
Graduate nurses	6
Special nurses	2

Carried forward 11 332

<i>Brought forward</i>	11	332
Pupil nurses	3	
Affiliated pupil nurses as follows:		
Franklin County Public Hospital	2	
Cambridge City Hospital	1	
Worcester Memorial Hospital	5	
Portsmouth Hospital	2	
Quincy City Hospital	4	
	—	28
<i>Haymarket Square Relief Station:</i>		
Matron	1	
Graduate nurses	2	
Pupil nurses	2	
Affiliated pupil nurses as follows:		
New England Hospital	1	
St. Margaret's Hospital	1	
	—	7
<i>East Boston Relief Station:</i>		
Matron	1	
Pupil nurses	2	
St. Margaret's Hospital	1	
	—	4
Total		<u>371</u>

TRAINING SCHOOL FOR NURSES.

Miss Ellen C. Daly, Superintendent of Nurses, writes as follows of the year's work in the Training School for Nurses:

Ninety-six preliminary students have been admitted during the year. Of this number fifty-three have become members of the school.

Two hundred twenty-five pupils from affiliating schools have entered. Two hundred twenty-nine completed the course and received certificates.

The employment of thirty graduate nurses for floor duty has helped materially in the care of the patients. Perhaps never in our time have we had fewer resignations from our graduate nurse staff. At the present time we have three vacancies.

The addition of teaching supervisors in our various departments is going to be of great assistance to our pupils in the aid given them through better teaching of practical nursing.

We feel a very large gap has been filled by the appointment of a social director for the school.

The pupils have taken advantage of the swimming pool, and almost all have learned to swim.

Our course in theory remains about the same, and we are not planning any extensive changes for the coming year.

On the whole, we feel the school is on a progressive basis. In all matters leading to this, the Trustees and Superintendent have been most helpful.

CHANGES IN THE STAFF OF EXECUTIVES AND MEDICAL ASSISTANTS.

Robert M. Coleman, M. D., Night Executive Assistant, resigned the first of March and Panos Dukakis, M. D., was appointed to succeed him.

Herbert G. Dunphy, M. D., was appointed Assistant Resident Surgeon beginning in February.

During the illness of Donald S. McKinnon, M. D., Executive Assistant, substitutes have carried on his work.

Cornelius P. Rhoades, M. D., Research Assistant in Pathology, resigned in May, and Harold E. MacMahon, M. D., First Assistant in Pathology, was appointed his successor. At the same time Robert A. McKeen, M. D., was promoted from the position of Second Assistant in Pathology to that of First Assistant in Pathology, and Alexander E. Brunschwig, M. D., Resident Assistant in Pathology, was appointed Second Assistant in Pathology. In August, Doctor Brunschwig resigned, and Douglas M. Gay, M. D., was appointed to succeed him. Allan G. Rewbridge, M. D., began service as Resident Assistant in Pathology on April 1, 1928. George K. Mallory, M. D., was appointed Resident Assistant in Pathology beginning April 16, 1928; in

June he was appointed Fourth Assistant in Pathology. Edward A. Burkhardt, Jr., M. D., was appointed Resident Assistant in Pathology beginning July 1, 1928. In June the titles in the Pathological Department were changed as follows: Research Assistant in Pathology, First Assistant in Pathology, Second Assistant in Pathology became, respectively, First Assistant in Pathology, Second Assistant in Pathology and Third Assistant in Pathology. Also the position of Fourth Assistant in Pathology was created. To the title Second Assistant in Pathology was added that of Visiting Pathologist at Sanatorium Division and most of the work of Robert A. MacKeen, M. D., was transferred to the Sanatorium Division.

George R. Minot, M. D., Professor of Medicine at Harvard Medical School, was appointed Director of the Thorndike Memorial and Chief of the Fourth Medical Teaching Service in January, succeeding Dr. Francis W. Peabody, who passed away in the autumn of 1927. Joseph T. Wearn, M. D., was then appointed Associate Director of the Thorndike Memorial and Associate Chief of the Fourth Medical Service. Herrman L. Blumgart, M. D., Assistant in the Thorndike Laboratory, left in August. John S. Lawrence, M. D., was appointed Assistant in the Thorndike Laboratory in October.

Arthur C. Ernstene, M. D., Resident Physician, Thorndike Laboratory, left September 1 and Albert W. Bromer, M. D., who had been Assistant Resident Physician, became Resident Physician. Samuel L. Gargle, M. D., Assistant Resident Physician, left the first of September. George P. Robb, M. D., served as Assistant Resident Physician during the months of June and July. In September the following appointments were made as Assistant Resident Physicians: Stacey R. Mettier, M. D., Clark Heath, M. D., Lawrence B. Ellis, M. D.

The following Assistant Residents in the Thorndike Memorial and Volunteer Assistants in the Fourth

Medical Service were appointed: Albert Gayland Young, M. D., beginning July 1; Samuel S. Ellis, M. D., beginning August 1; Eugene C. Glover, M. D., beginning August 1; F. H. L. Taylor, M. D., beginning September 1.

In the Neurological Service Edwin F. Gildea, M. D., served as Resident Physician from March 8 until September 1, when H. Houston Merritt, M. D., was appointed to succeed him.

Stanley J. G. Nowak, M. D., has served as Resident Surgeon for the Fifth Surgical Service since the first of October.

Richard Berg, M. D., has served as Resident Surgeon on the Bone and Joint Service since September 1.

Maxwell Finland, M. D., has served as Resident Physician on Second Medical Service since September 1.

Ben Arbor, M. D., has served as Resident Physician, Pediatric Service, since July 23.

Wilmot C. Townsend, M. D., has served as Resident Physician for Tropical Diseases since May 1.

At the South Department, Joel Rosenberg, M. D., Assistant Physician, left in January, and Charles T. Hinshaw, M. D., was appointed to the position of Assistant Physician. Doctor Rosenberg returned to the service in May and again resigned in August, when Charles E. Dyer, M. D., was appointed to succeed him. Fred Heimlich, M. D., who had served as Assistant Physician since August, 1924, resigned in June, 1928.

George R. Murphy, M. D., Assistant Resident Surgeon at the Haymarket Square Relief Station, left in February, and George Robbins, M. D., Assistant Resident Surgeon at the East Boston Relief Station, was appointed his successor.

Upon the transfer of George Robbins, M. D., from the East Boston Relief Station to the Haymarket Square Relief Station, James A. Dumas, M. D., was appointed Assistant Resident Surgeon at the East Boston Relief Station. He resigned in September and Stephen J. Malone, M. D., was appointed to the posi-

tion. Doctor Malone resigned at the close of the year and Harry L. Dougherty, M. D., was then appointed Assistant Resident Surgeon at the East Boston Relief Station.

The following-named Assistant Resident Medical Officers at the Sanatorium Division have completed service during the year:

	Service.
Samuel E. Attenberg, M. D.	3 months
Emory W. DeKay, M. D.	6 months
H. Bristol Nelson, M. D.	5 months
Benedict Ramin, M. D.	4 months
Samuel Brown, M. D.	4 months
Benjamin F. Sieve, M. D.	3 months
Garson M. Rosenbloom, M. D.	3 months
Israel Steinberg, M. D.	3 months
Richard J. Donovan, M. D.	4 months
Frank S. Davenport, M. D.	4 months
Bernard J. Manning, M. D.	4 months
Leslie K. Sycamore, M. D.	2 months
Charles L. Short, M. D.	4 months

I am grateful, indeed, to the Trustees for their unstinted support throughout the year.

I sincerely thank Doctor Wilson and Doctor Manary, and every other person who has so faithfully and intelligently aided in carrying out the year's program.

JOHN J. DOWLING, M. D.,
Superintendent and Medical Director.

BEQUESTS.

FUNDS WITH INTEREST ONLY AVAILABLE.

All Departments Except Sanatorium Division.

<i>Ball Fund.</i> — For the benefit of patients leaving the hospital poor and destitute of proper clothing	\$1,000 00
<i>William T. Bolton Fund.</i> — For the benefit of The Boston City Hospital	500 00
<i>Herbert L. Burrell Ether Prize Fund.</i> — For a money prize to be given to the house officer who administers ether or other anesthetic in the most skilful and humane manner	1,000 00
<i>Martha Howard Thurston Carter Fund.</i> — For books for the benefit of the Training School for Nurses	2,000 00
<i>Cheever Fund.</i> — To purchase and present to each house surgeon when his service expires a pocket case of surgical instruments, as a gift from Dr. David W. Cheever	3,500 00
<i>Patrick A. Collins Memorial Library Fund.</i> — For the purchase of new books for the use of hospital patients and for the replacing of those that have become damaged, lost or destroyed	500 00
<i>Silas Durkee Fund.</i> — For the benefit of The Boston City Hospital	15,050 00
<i>Charles F. Folsom Fund.</i> — “Income to be paid to Martha W. Folsom during her life, and, after her death, to be used toward maintenance of a free bed in memory of the late Dr. Charles Follen Folsom”	5,000 00
<i>Daniel S. Ford Fund.</i> — For the benefit of The Boston City Hospital	6,000 00
<i>Carried forward</i>	\$34,550 00

<i>Brought forward</i>	\$34,550 00
<i>Ann Maria Fosdick Fund.</i> —To be used for employment of special nurses:	
In savings bank	\$13,791 98
Stocks received from executor in hands of City Treasurer	672 00
	<hr/> 14,463 98
<i>Goodnow Fund.</i> —For the support of free beds	26,000 00
<i>Goodnow Library Fund.</i> —For replenishing the library of the hospital with books and pam- phlets suitable for the reading of the patients during convalescence	1,000 00
<i>Charles P. Hemenway Fund.</i> —For a free bed, to be known as the Charles P. Hemenway Memo- rial Bed	5,000 00
<i>Dr. George S. Hyde Fund.</i> —For the support of a free bed	5,000 00
<i>Nichols Fund.</i> —For the establishment and endow- ment of a City Hospital	2,000 00
<i>Norcross Fund.</i> —For the benefit of patients leaving the hospital poor and destitute of proper clothing	2,000 00
<i>Nurses' Fund.</i> —To be used under direction of superintendent and staff for employment of special nurses:	
Invested	\$13,530 00
Cash in hands of City Treasurer,	84 87
	<hr/> 13,614 87
<i>Perkins Fund.</i> —For books for the Medical Library, and for the purchase of artificial limbs and surgical appliances for the use and relief of patients leaving the hospital	7,500 00
<i>Shaw Fund.</i> —For the purchase of flowers and fruit for the use and comfort of the patients in the hospital	2,000 00
<i>Hettie Lang Shuman Memorial Library Fund.</i> — To be expended in perpetuity by the Trustees for new books for the use of hospital patients and for replacing volumes that have become damaged, lost or destroyed	2,000 00
	<hr/>
<i>Carried forward</i>	\$115,128 85

<i>Brought forward</i>	\$115,128 85
<i>Timothy Smith Fund.</i> —For the purpose of maintaining and conducting The Boston City Hospital; by vote of Trustees to be expended for special nurses	5,000 00
<i>Joseph Thompson Fund.</i> —To be used for employment of special nurses:	
Invested	\$3,775 00
Cash in hands of City Treasurer,	1 41
	<hr/> 3,776 41
<i>Catherine Watson Fund.</i> —\$6,000 for a free bed, to be known as the William F. Watson Free Bed. (Interest to be allowed to accumulate until fund reaches \$25,000.)	7,385 20
<i>Mehitable C. C. Wilson Fund.</i> —For the benefit of Medical Library	500 00
<i>The Albert N. Blodgett Fund.</i> —To be used for employment of special nurses:	
In savings bank	4,598 32
	<hr/> Total
	<u><u>\$136,388 78</u></u>

Sanatorium Division.

<i>Susan H. Leeds Fund.</i> —For use in the department of the City's Home for Consumptives	<u><u>\$3,927 77</u></u>
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FUND WITH BOTH PRINCIPAL AND INTEREST AVAILABLE.

<i>Julia M. Robey Fund.</i> —To be used for improvement at Convalescent Home	<u><u>\$2,887 91</u></u>
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HOUSE RULES.

WITH RULES FOR ADMISSION, GOVERNMENT AND DIS-
CHARGE OF PATIENTS; ALSO RULES FOR VISITORS.

HOUSE RULES.

The doors and gates of the Hospital will be closed at 10 o'clock in the evening, at which time all inmates, excepting Head Nurses (who are permitted to remain out until 12 o'clock midnight), shall be quiet, and all not on duty shall be in their rooms, unless otherwise specifically permitted.

All officers, nurses and employees of the Hospital when going and coming to and from the Hospital, shall enter and go out by the Entrance Office, and by no other entrance. Such officers and employees as are required shall use the time register and method of booking that the Hospital rules require.

A record shall be kept of all persons entering the Hospital between the hours of 10 o'clock in the evening and 7.30 o'clock in the morning.

No employee shall be absent from the Hospital except when permitted by special rules or by the Superintendent.

When requesting leave of absence for health reasons, an employee must present a recommendation from some member of the Hospital Visiting Staff, certifying to the necessity for such absence.

No discharged employee shall be reinstated without the consent of the Board of Trustees.

No officer, nurse, male nurse or other employee shall, directly or indirectly, receive money or other gifts from or in behalf of patients, except with the approval of the Superintendent.

The use of tobacco, wine and intoxicating liquors is

prohibited within the Hospital, unless prescribed by the Visiting Physicians or Surgeons.

All profane and improper language, loud talking and incivility are prohibited.

All employees shall observe such further rules and directions for their conduct as may from time to time be established.

ADMISSION OF PATIENTS.

No person having acute venereal disease or alcoholism shall be admitted, unless his condition is urgent, except as a paying patient.

No person shall be admitted to the Hospital whose case is judged to be incurable, unless there be urgent symptoms which are deemed capable of being relieved.

Persons with state settlements, unless they stand in need of immediate relief, are to be referred to the State Hospitals.

Patients settled in other cities and towns in Massachusetts are to be referred to their own city or town for treatment, Boston cases being given the preference.

Unsettled cases, if resident in Boston, may be admitted as paying patients.

Patients may be admitted to the privileges of the Hospital at such rates of board as the Trustees may from time to time by vote determine, payment for such cases being secured by the friends of the patient or by the authorities of the city or town in which the patient is legally settled.

Whenever, in the opinion of the Trustees, the circumstances of the patient will warrant it, the whole or a part of the board shall be paid.

If separate apartments or articles not usually furnished at the Hospital are furnished, such payment shall be made therefor as the Trustees shall deem reasonable.

Persons non-resident and not settled in Boston are to be admitted only as private patients, *i. e.*, paying patients in private rooms.

All accident or emergency cases shall be received at all hours, night or day, irrespective of settlement.

In all cases where any question arises as to the treatment of newly admitted or other patients, it shall be the duty of the House Officer to consult with the executive on duty in regard to such treatment until the arrival of the Visiting Physician or Surgeon.

If, in the judgment of the Admitting Physician, the condition of a newly admitted patient is sufficiently urgent to demand the attention of the visiting staff, he shall so notify the House Officer and shall direct him to call his Visiting Physician or Surgeon.

In case alcoholic drink is administered to a patient before or after placing him in the ambulance, or by any other than Hospital employees before the arrival of the ambulance, the same is to be promptly reported to the Admitting Physician, and a record of the fact made in the clinical record book. This rule covers cases brought by conveyances other than Hospital ambulances.

GOVERNMENT OF PATIENTS.

Patients shall implicitly observe all the rules of the Hospital.

Patients shall be in their proper places in the wards during the visits of the Visiting Physicians and Surgeons, and always before 7.30 o'clock in the evening, unless specially excused by the Superintendent.

Such free patients as are able shall assist in nursing and perform such other services as may be reasonably required of them.

No patient shall leave the Hospital grounds without a pass from the Superintendent, nor leave his ward without the consent of the Nurse in charge.

No patient shall purchase, or cause to be purchased for him, any article of food whatsoever, nor any other article, without the consent of the Superintendent.

Profane and obscene language, loud talking and incivility are prohibited.

Patients may be visited by clergymen of their own

selection, and any wish for the performance of a particular religious rite shall be granted when practicable.

Complaints, for whatever cause, may be made to the Superintendent, and whenever requested shall be by him reported to the Trustees.

DISCHARGE OF PATIENTS.

Patients shall be discharged by the Superintendent.

Upon the request of patients discharged on the recommendation of the Visiting Physicians or Surgeons, they shall be provided with a certificate stating their condition at the time of discharge, whether cured, relieved or not relieved, which certificate shall be signed by the Superintendent.

Whenever a patient is removed from the Hospital without the approval of the Superintendent, a written statement to that effect shall be required from any person assuming the responsibility of the removal.

VISITORS.

No person shall visit any part of the premises except on business, or at such times as may be fixed for the reception of visitors, without the permission of the Superintendent or of some one of the Trustees.

Daily, from 2 to 3 o'clock in the afternoon, friends may be permitted to visit patients, though no patient shall receive more than two visitors at that hour; and from 6 to 6.30 o'clock on each week day friends may be permitted to visit patients, though no patient shall receive more than one visitor at that hour. Children under sixteen years of age are prohibited from visiting the Children's Wards. In all cases, however, the Trustees and the Superintendent may exercise discretionary powers as to excluding or admitting visitors.

When visitors are admitted outside the regular visiting hours they shall not be permitted to remain more than half an hour, unless a special permission to remain longer is granted.

All visitors shall leave the Hospital when the bell rings at the expiration of the visiting hour.

No visitor shall take any meal in the Hospital, or pass the night therein, without permission of the Superintendent or one of the Trustees.

No visitor shall be allowed to give any article of food or drink to a patient except by permission of the Nurse; and any article sent to a patient shall be left at the Entrance Office.

SPECIAL RULES FOR THE GOVERNMENT OF THE SOUTH DEPARTMENT.

The department of The Boston City Hospital located on the westerly side of Massachusetts avenue shall be designated as the South Department of The Boston City Hospital. It shall receive patients who require treatment for diphtheria, scarlet fever, measles, whooping cough, and other contagious diseases as may be determined from time to time by the Trustees.

The Superintendent and Medical Director of the Hospital shall, under the direction of the Trustees, have the general control and management of this department in the same manner as of other departments of the Hospital.

The rules of the Hospital shall, so far as applicable, and except as hereinafter provided, apply to the various officers and employees and to the conduct and management of this department.

SPECIAL RULES FOR THE GOVERNMENT OF SANATORIUM DIVISION.

Admission of patients to the Sanatorium Division is made at the Division of Tuberculosis, Health Department, Boston. No children are admitted.

Patients may be visited by their family or friends after 3 p. m.

Patients on the dangerous list may have visitors at any time during the day or night.

Visitors must enter the sanatorium through the Administration Building and obtain a pass at each visit.

SPECIAL RULES FOR THE GOVERNMENT OF THE HAYMARKET SQUARE AND THE EAST BOSTON RELIEF STATIONS.

The Boston City Hospital Relief Stations are established not as hospitals, but as departments of The Boston City Hospital for temporary relief, and the rules and methods prevailing now in the Hospital shall, so far as applicable, and not inconsistent with special rules, apply to the Relief Stations.

The Stations shall afford temporary relief in all classes of accident and disease. They shall be open at all hours for patients requiring treatment or attention. Patients requiring ward treatment, whether received at the Stations or taken up in ambulances, shall, so far as is consistent with their welfare, be forthwith transferred or carried to the Hospital for extended treatment, but ward accommodations shall be afforded patients whose condition is such that they cannot properly be transferred. Patients may, however, if it is deemed desirable, be transferred by the ambulances to other hospitals or to their homes. First treatment may be afforded at the Stations although the applicants are not such as require ward treatment.

The Superintendent of the Hospital shall have the general administration, management and control of the Stations, the same as of other departments of the Hospital.

The Superintendent shall, once a year, nominate for confirmation by the Trustees a Resident Surgeon and one or more Assistant Resident Surgeons for each Station; and shall appoint and employ or detail for service in each department, from time to time, as may be necessary, subject to the approval of the Trustees or of the proper committees, a Matron, a Supervisor, Nurses, Male Nurses and such other minor employees as

may be required for the proper conduct of the Station, who shall be subject to his supervision.

The various officers and employees of the Stations shall perform such duties other than those specified as may be required by the Trustees or the Superintendent, according to the nature of their respective duties. The Resident Surgeons, the Matrons, Supervisors, and such other officers as may be so required, shall reside at the Stations.

PATIENTS.

Alcoholic and insane patients shall not be received unless there is surgical or medical complication making hospital treatment absolutely necessary.

No patient, after being admitted to the wards, shall leave the Station until his discharge without a pass from the proper officer, nor shall he visit other parts of the Station without permission.

Ward patients shall be discharged by the Superintendent or the Resident Surgeon.

AMBULANCE SERVICE AT THE HAYMARKET SQUARE RELIEF STATION.

The ambulance service of the Station shall be under the direct control of the Resident Surgeon, and shall co-operate with that of the Hospital with which it shall form one general system. Ambulances shall, in response to calls, be dispatched from the Station or the Hospital as the exigency may require. The utmost dispatch shall be exercised in the ambulance service, so far as is consistent with a regard for the welfare of the patient and the interest of the public.

Ambulances shall in general be sent from the Station or the Hospital, at least upon a general alarm, to all fires occurring in the city proper and in such further districts as may be determined upon.

An ambulance shall be held during the hours of the day in complete readiness to make immediate response to calls, and shall be kept in condition to make prompt response to calls at any time of the night.

A House Officer shall accompany the ambulance, shall direct its course and shall have direction of the care and treatment of the patient until received at his destination.

The foreman of the ambulance service at the Hospital Station shall visit and inspect the Ambulance Department of the Station from time to time, but the immediate carrying out of directions shall be under the assistant foreman at the Station.

AMBULANCE SERVICE AT THE EAST BOSTON RELIEF STATION.

The rules and methods prevailing in the Haymarket Square Relief Station ambulance service shall, so far as applicable, be effective in the East Boston Relief Station ambulance service.

SPECIAL RULES FOR THE GOVERNMENT OF THE CONVALESCENT HOME.

The department of The Boston City Hospital located on Dorchester avenue, in Dorchester, shall be known as the Convalescent Home, and shall receive such patients recovering from acute diseases as shall be transferred to it from the Main Hospital for treatment during convalescence.

The Superintendent of the Hospital shall, under the direction of the Trustees, have the control and management of the Convalescent Home in the same manner as of other departments of the Hospital.

The Superintendent shall appoint, subject to the approval of the Trustees, a Matron, and shall employ, under their direction, such further assistants as may be necessary for the proper conduct and service of the home.

The Matron, under the direction of the Superintendent, shall have the immediate charge of the home and the control of all nurses and other employees and patients. She shall reside at the Home.

VISITORS.

Friends may be permitted to visit patients daily between three and four o'clock in the afternoon. In all cases the Trustees, Superintendent and Matron may exercise discretionary powers as to excluding or admitting visitors.

Visitors shall leave the Home and grounds at the expiration of the visiting hour, and shall visit no part of the Home or grounds other than the reception room, except by permission from the proper authority.

No person shall give any article of food or drink to a patient unless by permission of the Matron.



